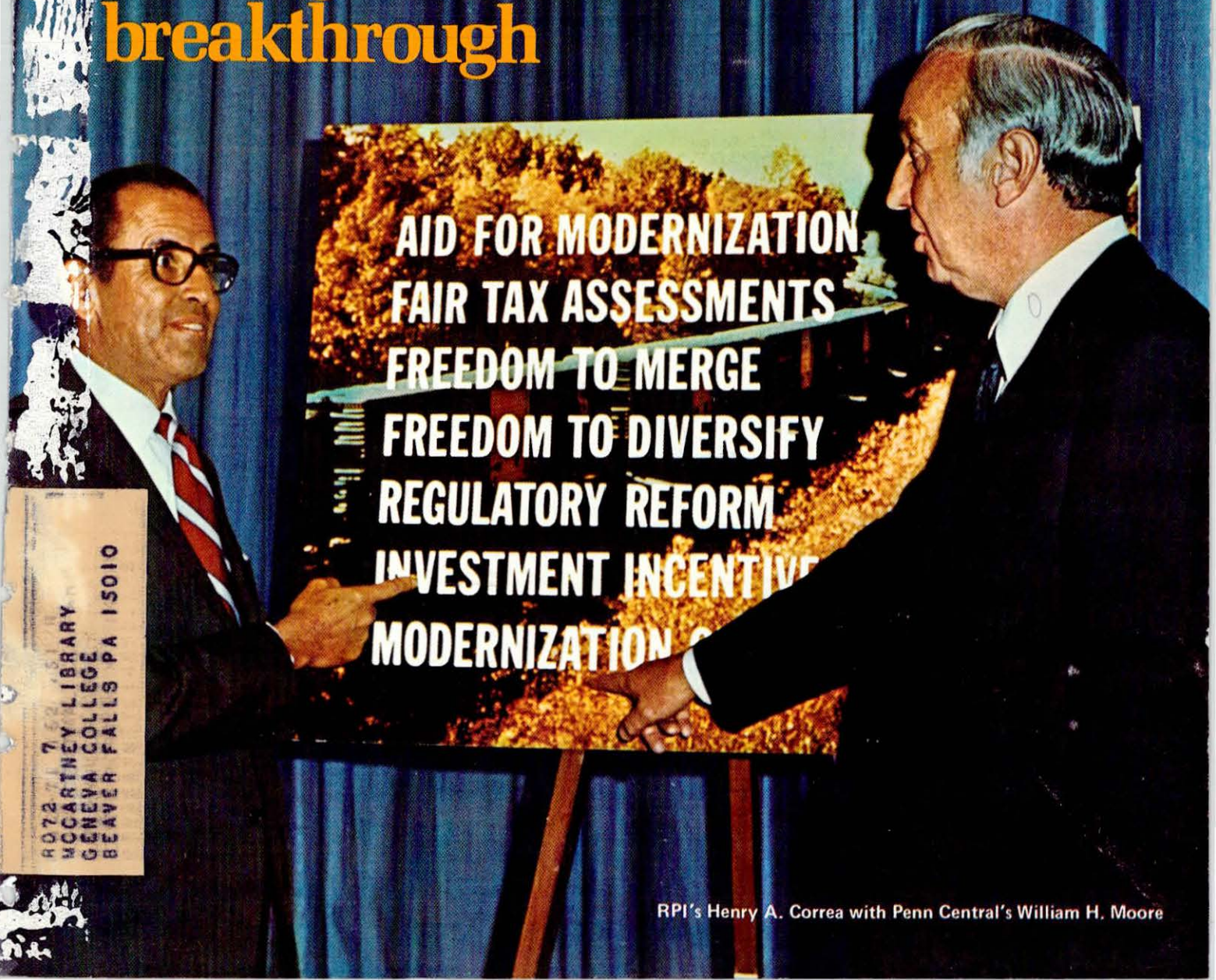
TRANSIT: Buffalo and Baltimore prepare to dig

July 12, 1971

RAILWAY AGE

RAILROADS AT MIDYEAR:

united industry sees signs of a breakthrough



RPI's Henry A. Correa with Penn Central's William H. Moore

MCCARTNEY LIBRARY
GENEVA COLLEGE
BEAVER FALLS PA 15010

50,000 miles to nowhere.

Half of southern New England's railroad lines accounts for only 10 per cent of its total railroad traffic.

In 1961, an Interstate Commerce Commission investigator recommended that 1200 miles of the New York, New Haven, and Hartford Railroad be considered for abandonment, in an attempt to save the failing railroad.

Seven and a half years later, and $128,000,000 in debt, the New Haven ceased operation as a separate railroad, having obtained approval for dropping only 235 of the originally recommended 1200 miles.

It may seem incredible that a prescription would be recommended and then withheld.

And perhaps it is easier to document a death, than the dying process. But the same symptoms mark a great many railroads in their struggle to stay alive today.

The study of just one railroad, in another area of the country, shows that 40% of its railroad line brings in only 3.8% of its total freight revenue. The yearly losses on these 4,300 miles of railroad line are estimated at more than a thousand dollars a mile, or more than $4,000,000 a year.

On some other roads, as much as one-third of the rail line could be abandoned, due to changing market requirements.

Nationwide, there may be as many as 50,000 miles of unnecessary lines... 50,000 miles that lead nowhere but to greater losses for our railroad system.

There is no question that original policies on maintaining rail service to virtually every area were in the best interests of the shipping public.

But such policies date back to a time when railroads were the only feasible way of shipping. Today, many other modes of transportation can perform this service, often more practically.

In fact, other modes of transportation support the railroads' plea for a new and realistic policy that would provide for rapid abandonment of unnecessary and uneconomical railroad lines.

Twenty-five years ago, the question of maintaining unnecessary railroad lines might have been academic. In those days, a healthy railroad industry could underwrite such deficit services.

Today, it is no longer academic. For today the railroads face a crisis for survival.

It is also a crisis for our entire transportation system, and for the economy itself.

But it is a crisis that can be measurably helped with a new policy permitting the swift elimination of unnecessary railroad services, which are draining the life from a vital link in the nation's transportation system.

This message on behalf of Americans and their railroads appears nationally in leading newspapers, as a public service of **Pullman-Standard,** America's leading builder of rail cars. *Reprints* are available by writing Pullman-Standard Division, Pullman Incorporated, 200 South Michigan Avenue, Chicago, Illinois 60604.

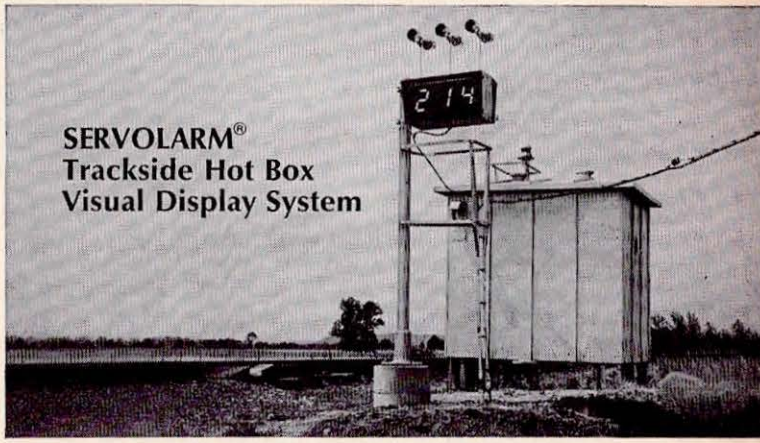
"Never you mind 'bout that new Servo display system you're gettin' next month—right now, start walkin' and don't stop till you find the hot box!"

EVEN without the guns pointed at him, our railroad friend's task of "walking the train" to find a hot journal box was not an enviable one. It certainly would have been simpler and quicker if he did have our new SERVOLARM® Trackside Hot Box Visual Display System.

Designed to operate with a standard SERVOSAFE® Hot Box Detector System, the SERVOLARM visually signals the presence of a hot journal box and also pinpoints its location by means of a digital readout axle count. SERVOLARM helps to eliminate train stops and crew delays. It simplifies and speeds up the entire hot box location procedure by directly notifying the crew via a trackside display board.

SERVOLARM can be quickly and easily installed with a minimum of construction equipment and labor, while eliminating long-distance wiring and extensive communication equipment costs. Compared to other, more complex methods of communication, SERVOLARM offers greater reliability and reduced maintenance.

Are you tired of looking for hot boxes the hard way? Take a look at SERVOLARM—just ask for Tech Data Publication 2013.



Bi-directional display board presents digital readout, showing axle count location of hot journal box. If no hot boxes are detected, display board reads "000". Flashing signal lamps on top indicate presence of hot box.

SERVO SYSTEM SERVICE—Servo Corporation of America backs up its railroad products with dependable support and assistance—site survey, application engineering, detailed proposal, installation checkout, plus field service and personnel training.

servo corporation of america

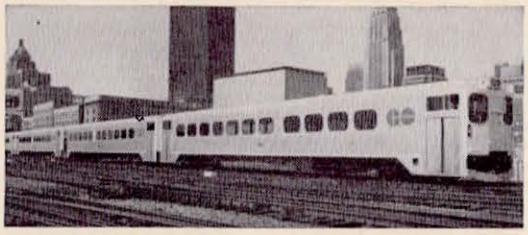
servo

railroad products division
111 new south road
hicksville, n.y. 11802
516-938-9700

MEMBER RPI

Circle 3 on coupon page 43

We helped break up the love affair between the commuter and his car.



Thousands of commuters in the Province of Ontario have happily kicked the daily car habit.

They're kissing goodbye and riding to work by GO Transit. Operated by the Government of Ontario, this rapid transit system is 60 miles long and one of the most highly regarded in North America.

The system has many appealing features. One is the cars. They're quiet and comfortable. Cool in summer. Warm in winter. Easy to enter and leave.

We built them and we built them quite differently. Our cars are unusually long: 85 feet. And, through the extensive use of aluminum, they're remarkably light, too. About *half* the weight per foot of length compared to conventional steel cars.

This means substantial savings in initial cost, power requirements and many aspects of maintenance.

Our experience in building this advanced type of commuter and mass transit car is unique in North America. We've proved it in Montreal with the Expo mass transit system. And in Ontario with GO Transit and the Toronto Transit Commission's subway system.

We could prove it in your city, too. Just contact our Director of Marketing.

Hawker Siddeley Canada LTD.

EXPORT DEPT., 7 KING STREET EAST, TORONTO 1, ONTARIO, CANADA. TELEPHONE: 416-362-2941. TELEX: 02-2605.

A member of the Hawker Siddeley Group, world-wide suppliers of mechanical, electrical and aerospace equipment.

Circle 4 on coupon page 43

RAILWAY AGE

July 12, 1971 • Vol. 171 No. 1

Editorial and Executive Offices
New York, N.Y. 10013, 350 Broadway

ROBERT G. LEWIS: Publisher
LUTHER S. MILLER: Editor
FRED C. MILES: Executive Editor

Mechanical: Fred N. Houser
Art Director: Maurice H. Mates
Art Editor: Marvin Friedman
Editorial Assistant: June Meyer
Librarian: Edith C. Stone
Production Manager: Fred B. Hecht
Manager—Contract Department:
Constance Nicolai
Promotion Director: George Dusenbury

Editorial and Executive Offices
Chicago, Ill. 60602, 29 E. Madison St.

C. JAMES FISHER: Vice President—Sales
GUS WELTY: Senior Editor
Mechanical: Robert D. Bartley
Engineering:
Merwin H. Dick R. E. Dove
Signaling & Communications:
Robert W. McKnight
Editorial Assistant: Wanda Brown

Washington, D.C. 20004,
National Press Bldg.
Washington Editor: Reid Beddow

Brighton, Sussex, England
8 St. George's Place
International Editors:
John Levett Paul Goldsack

Special Projects: Joe W. Kizzia

Railway Age, established in 1856, is indexed by the Business Periodicals Index, the Engineering Index Service and the Public Affairs Information Service. Name registered in U.S. Patent Office and Trade Mark Office in Canada.
Published semi-monthly by the Simmons-Boardman Publishing Corporation, 508 Birch St., Bristol, Conn. 06010.
Railroad employees' subscription rate, U.S. possessions, Canada and Mexico, $6 one year, $9 two years, all others $15 for one year, payable in advance and postage paid. To railroad employees elsewhere in the western hemisphere, $10 a year; in the eastern hemisphere, $15 a year. Single copies 60¢, except special issues.
Address all subscriptions, change of address and correspondence concerning them to Subscription Dept., Railway Age, P.O. Box 530, Bristol, Conn. 06010.
Change of address should reach us three weeks in advance of next issue date. Send old address with new enclosing, if possible, your address label. Post Office will not forward copies unless you provide extra postage.

Member of ABC AUDITED PAID CIRCULATION RPI RAILWAY PROGRESS INSTITUTE

Circulation Dept.: John Rogers Director of Circulation, 350 Broadway, New York, N.Y. 10013. POSTMASTER—SEND FORM 3579 TO P.O. BOX 530, BRISTOL, CONN. 06010.

Printed at the Hughes Printing Co., 34 North Crystal St., East Stroudsburg, Pa. 18301. Second-class postage paid at Bristol, Conn., and at additional mailing offices.

supporting **ASTRO**

Inside

LUTHER MILLER

"THIS IS THE YEAR"

Washington Editor Reid Beddow submitted his midyear report on the state of the industry (p. 22) along with a more or less comforting quotation from the late H. L. Mencken: "Don't worry . . . Hell will break loose somehow." That succinctly sums up the situation railroads face as they head into the home stretch of a most portentous year.

There is a widespread belief in Washington that something is going to be done this year about "the railroad problem," one way or the other. We could see the beginnings of nationalization. But more likely, we are going to see Washington move on a broad legislative front to head off that eventuality.

Various proposals now afloat at DOT, the White House and on Capitol Hill to help strengthen railroads are not, for the most part, really new, as our Washington man points out. What is new is a growing feeling that this year they are going to be implemented to an important degree.

The main reason for this optimism arises out of the historic *entente cordiale* which the railroads, the truckers, and the waterway operators have now achieved on a matter which they conceive to be in their common interest: the survival of a strong, privately-operated railway system.

THE INTERMODAL AGREEMENT—AND HOW IT CAME TO BE

Nobody is talking much in Washington about the agreement which the three modes have reached on common legislative goals. Action speaks louder than pronouncements—and the interested parties would rather let Congress take over at this point. It was, in fact, Congressional leaders who suggested that the modes get together on a legislative program. Such a program was agreed upon, covering a dozen or so separate items—the dry bulk exemption, the agricultural exemption, railroad abandonments, below-cost rates, the investment tax credit, equipment amortization, discriminatory state taxation, creation of a Transportation Finance Corporation, grade crossing expenditures, and a statement of support for the ICC, among other things. The anticipation was that some or all of these would be embodied in legislation to be introduced soon after the Fourth of July recess.

To the AAR, to the American Trucking Associations and to the Water Transportation Association go high marks for a degree of statesmanship not previously seen.

Meanwhile, there is still the railroads' ASTRO program, some of which is embodied in the intermodal agreement—and to many thousands of railroad people go high marks for bringing ASTRO's recommendations, and the story behind them, to the attention of the nation. Some of these efforts—by the Railway Progress Institute, by the AAR, by ASTRO's national coordinator Don Martin and by such individual railway suppliers as Pullman Inc.—are described on p.p. 25-26.

Conditionaire.™ The only things it spoils are your customers.

ACF's Conditionaire car has a temperature control system so precise it keeps produce fresher, longer than any car on the rails.

Potatoes, carrots, onions, even citrus—all of them arrive in beautiful condition, whatever the weather. And the list is growing every day.

Conditionaire's big on economy, too. 183,000 pounds big. That gives you over three times the payload of conventional cars. And it moves in bulk, eliminating crating and bagging costs.

Handling's a lot simpler with full-length hatches. And outlets that cut unloading time to the bone.

Conditionaire. It pampers your produce. And your customers.

ACF Industries, Incorporated, Amcar Division, 110 Clark Street, St. Charles, Mo. 63301.

acf ACF INDUSTRIES

MEMBER RPI RAILWAY PROGRESS INSTITUTE

RAILWAY AGE

July 12, 1971

NEWS

EQUIPMENT	For Penn Central, 567 more new cars	p. 8
	Rolling stock needs: $15.3 billion in nine years	p. 11
	ASEA will equip Colorado mining road	p. 14
FINANCIAL	PC reports slight cash improvement	p. 8
	C&O/B&O half-year earnings rise	p. 8
	Western Pacific posts a profit	p. 15
	For the industry: A poor first quarter	p. 13
TECHNOLOGY	250 computers are now on line	p. 8
	British Rail uses automatic p.a. system	p. 12
SECURITY	Railroad police: Help wanted	p. 14
TRANSIT	DOT awards TACV contracts	p. 8
	PATH opens $30-million terminal	p. 8
	Illinois okays transit-aid program	p. 12
	St. Louis creates a Transit Authority	p. 13
LABOR	Railroad retirement benefits hiked	p. 16

FEATURES

ENGINEERING	L&N rail-welding program moves into high gear	p. 19
MIDYEAR REPORT	A united industry sees signs of a breakthrough	p. 22
	Washington's "railroad survival kit"	p. 23
	Winning friends from the grass roots to Congress	p. 25
MOVING PEOPLE	What's happening—and where	p. 35
	Buffalo puts transit on the map—rapidly	p. 36
	Baltimore: "We'll start to dig in '73"	p. 37

COMMENT

INSIDE	"This is the year"	p. 5
LINES ON LABOR	UTU picks its strike targets	p. 16
VIEWPOINT	One weak link in railroading's unity chain	p. 60
WATCHING WASHINGTON	Is the tax credit on the way back?	p. 15

COVER

Railway Age Art Director Maurice Mates photographed Railway Progress Institute Chairman Henry A. Correa and Penn Central President William H. Moore at the National Press Club in Washington just prior to a presentation of RPI's "Make Way for Progress" slide show.

DEPARTMENTS

Carloadings	p. 57	Revenues and Expenses	p. 53
New Products	p. 43	Supply Trade	p. 61
People in the News	p. 48	Transit Personnel	p. 50

Short and Significant

RAILROADS

FOR PENN CENTRAL, 567 MORE NEW CARS

Penn Central has negotiated another leasing agreement under which it will acquire 567 new 70-ton box cars. PC will lease the cars from United States Railway Leasing Co., which will purchase them from its affiliate, U.S. Railway Manufacturing Co. The lease will be for 20 years, with an option to renew for an additional five-year term. The new agreement, subject to court approval, brings to 7,338 the number of new freight cars PC has arranged to lease this year.

PC REPORTS SLIGHT CASH IMPROVEMENT

Penn Central reported a cash balance of $51.4 million on June 30, nearly double the $27 million that had been forecast. The improvement was attributed to "better business than forecast, reductions in outstanding receivables and more efficiency in handling transit cash." The trustees noted that "the difference between $27 million and $51.4 million represents less than two and one-half days' gross receipts."

C&O/B&O HALF-YEAR EARNINGS RISE

Chesapeake & Ohio/Baltimore & Ohio have reported first-half earnings of $28.3 million, compared with $22.6 million in the 1970 period. Despite coal-mine work stoppages in June and a two-day signalmen's strike in May, the consolidated roads reported second-quarter earnings of $19.5 million, against $19 million a year ago. Not included in second-quarter results are payments to join Amtrak and related labor protection costs. Accounting treatment for these costs is now under consideration at the ICC.

250 COMPUTERS ARE NOW ON LINE

As of June 1, 250 computers were in use by U.S. and Canadian railroads—a net increase of seven over a year ago. In terms of rental value, 84% are supplied by IBM, 3.7% by Univac, 6.5% by RCA, 3.5% by General Electric, 1.6% by Collins. 0.5% by Honeywell, and 0.2% by NCR. Biggest computer users are Penn Central, with 28; Canadian National, 21; Southern Pacific, 20; Burlington Northern, 17; C&O/B&O, 14.

N&W CREATES ECOLOGY POST

Norfolk & Western has appointed Ralph S. Bryan, Jr., a research and test engineer, to the new position of director-environmental protection. N&W said creation of the new office resulted from a detailed study undertaken by an anti-pollution committee which investigated potential sources in the road's 14-state area. "Although railroads are not heavy polluters, we are increasing our efforts to reduce or eliminate what pollution may exist," said Walter S. Clement, vice president-public affairs.

TRANSIT

DOT AWARDS TACV CONTRACTS

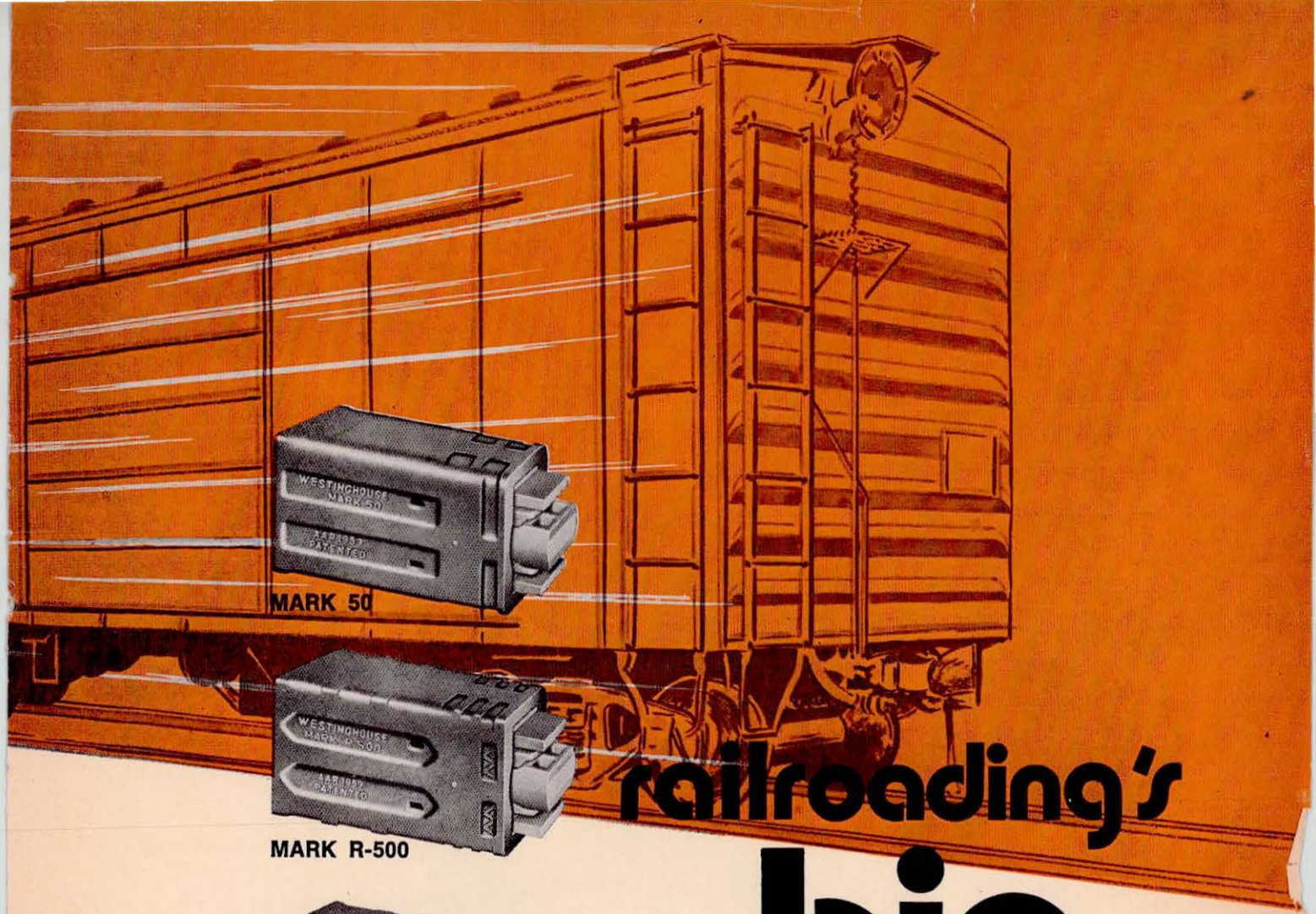
The U.S. Department of Transportation has awarded a $3.5-million contract to Grumman Aerospace Corp. for construction of a tracked air cushion research vehicle to be completed by the end of March 1972 for testing at the new High Speed Ground Test Center at Pueblo, Colo. DOT also awarded contracts valued at a total of $2,850,000 to the Rohr Corp. and Vought Aeronautics Co. to produce designs and mockups of a TACV to be powered by a linear induction motor.

PATH OPENS $30-MILLION TERMINAL

America's first air-conditioned subway station—the new, $30-million Port Authority-Trans Hudson (PATH) terminal in downtown Manhattan—opened for business July 5. It replaces the 62-year-old Hudson Terminal, at 30 Church St. During the Independence Day-weekend changeover, passengers were bussed to and from PATH terminals further uptown. The new terminal, which is used by an estimated 85,000 passengers daily, is built 60 feet below street level within the foundations of the new World Trade Center. It has 40 exact-change turnstiles and change-making machines.

BUFFALO EYES TRANSIT HARDWARE MARKET

Buffalo, N.Y., which will soon be in the market for $25 million worth of transit cars (p. 36), anticipates that other cities will swiftly follow its lead with a resulting heavy demand for transit hardware. So the Greater Buffalo Development Foundation commissioned a study on "rapid transit vehicle components that might be manufactured in Erie County and the Western New York Area." Consultant James H. McGourty found the area to be "very well equipped, by virtue of its industrial mix and know-how" to capture a big share of a market which he feels may involve 10,000 new transit cars, in the U.S. and Canada, in the next decade. His detailed study is being made available to interested manufacturers.



railroading's big three!

DRAFT GEARS **BIG** IN PERFORMANCE, PROTECTION, SAVINGS...

- A.A.R. Approved. Specification M-901E—MARK 50 and MARK R-500; Specification M-901G—MARK H-60.
- Service-proven top performance and dependable protection.
- Economical. Friction plates eliminate wear on the housing, the most costly component of any draft gear. Durability, reuse assured.
- Diversity for your requirements. Friction—MARK 50; Rubber-Friction—MARK R-500; Hydraulic-Friction—MARK H-60.
- Applicable to all types of cars with 24⅝" pockets. Travel 3¼".

To help preserve your cars with savings and profit, Specify the BIG THREE —MARK 50 . . . MARK R-500 . . . MARK H-60.

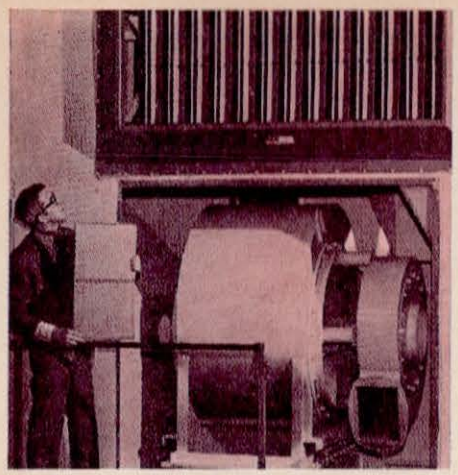
CARDWELL WESTINGHOUSE COMPANY

332 SOUTH MICHIGAN AVENUE, CHICAGO, ILLINOIS 60604, U.S.A. • TELEPHONE: 312-427-5051

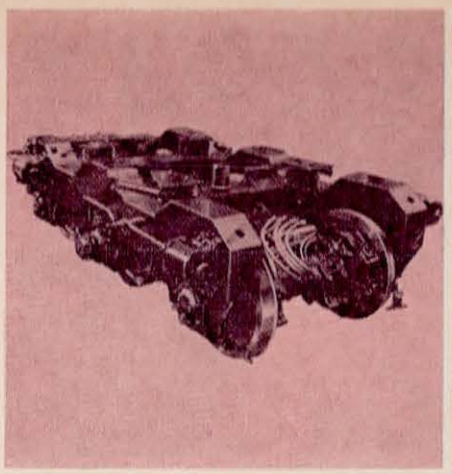
INTERNATIONAL DIVISION SAME ADDRESS

CANADIAN CARDWELL COMPANY LTD., 1875-46TH AVE., LACHINE 620, QUEBEC • TELEPHONE: 514-636-4864

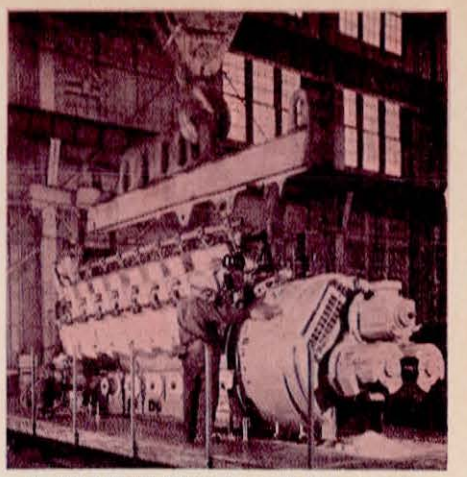
Circle 5 on coupon page 43



A single mechanically driven blower and fully ducted electrical cooling and combustion air system with pressurized electrical control compartment.



Hi-adhesion trucks with low weight transfer characteristics and matching wheelslip highly discriminating and modulating control system.



Up-dated Model 251 engines with high capacity, water-cooled turbocharger and steel cap pistons.

LOOK AT THESE NEW "MLW" FEATURES

MLW-Industries
A Division of
MLW-Worthington Limited
1505 Dickson St., Montreal 426, P.Q.

Circle 6 on coupon page 43

RAILWAY AGE
NEWS

ROLLING STOCK NEEDS:

$15.3 billion in nine years, DOT's Baker tells Congress

DOT estimates rails need $15.3 billion for 747,000 new and rebuilt freight cars and 11,169 locomotives—all in the next nine years—Assistant Secretary for Policy Charles D. Baker told the Senate Subcommittee on Freight Car Shortages June 29.

"This does not include cash for all other rail needs, such as for track and new terminals," Baker added.

He said rails' present and projected financial position "probably precludes" their reaching a level of expenditure anywhere near $15.3 billion.

He pointed out that rails were not generating a sufficient cash flow to renew existing fleets, let alone adding to them.

Baker broke down industry rolling stock requirements this way:

— 617,000 cars each of 80-ton capacity costing $8.8 billion, or an average cost of $14,200 per car to meet a projected rail demand of 1.03 trillion ton-miles in 1980.

— 130,000 cars costing $2.3 billion to satisfy existing shortages.

— 11,169 road and switching locomotives costing $3.7 billion.

Baker said the inability of rails to renew existing fleets "raises a real question as to why the railroads should continue to spend any money at all in the railroad industry in the future." He cited the facts that rails increased their net investment in transportation property by 30% since 1950 while pre-tax earnings declined almost 50% over the same periood.

"Very simply," he declared, "that means the railroads have gotten no return at all on their increased investment since 1950."

Baker said DOT saw these actions as helpful in coping with the problem:

— Passage of S. 1731, AAR's equipment insurance fund bill, with certain modifications, to create a revolving fund to insure purchase of rolling stock with private capital.

— Innovative pricing so that rails can spread out seasonal peak demands for cars, i.e., providing an economic incentive to store commodities by creation of off-peak rate advantages.

— Experimentation with demurrage and per diem rates as a spur to improved car utilization.

— Installation of a $1-billion car scheduling and control system on all Class I rails to achieve a 15% increase in car availability.

Baker, who opposed creation of freight-car pools until their effect on "traditional carrier-shipper relationships" is studied, cautioned the subcommittee that solution of the freight car problem alone was only a piecemeal response to over-all rail problems.

"Indeed, it is possible that any piecemeal actions taken at this time may conflict with the optimal over-all solution which the Administration and the Congress may arrive at in deciding the proper approaches to the total railroad problem," he said.

PC's financing proposal

Penn Central Trustee Jervis Langdon, Jr., told the subcommittee on June 30 that PC needs $1 billion of new equipment in the next five years. But he said the equipment, mostly to be obtained through leasing, could not be financed without passage of S. 1731, which he strongly endorsed.

S. 1731, said Langdon, is important to PC because (1) it would make financing feasible "on the scale on which it is needed" (2) PC could expeditiously arrange financing and get deliveries to meet seasonal requirements (3) the interest cost of financing to PC would be significantly lower.

Langdon recommended the bill be amended to provide for financing the rehabilitation of existing car equipment.

He said rebuilds are an important economic alternative to the purchase of new equipment, and "it would be wasteful from the standpoint of railroads and shippers alike if this choice were not evaluated."

He also backed a reconstituted Reconstruction Finance Corporation, which would make loans to ailing firms, but said it would be of no value to PC, because the road's creditors would oppose such loans if they were made a prior claim to those of the creditors.

In addition, the former Rock Island president disclosed:

— Despite barely being able to offset scheduled equipment retirements this year, PC's 1971 equipment acquisition program (RA, May 31, p. 11) nonetheless will be the first in six consecutive years to arrest the continuing decline in PC's net ownership of cars.

— PC's serviceable car fleet declined from 215,627 to 177,539, or about 18%, from 1965 to year-end 1970. Weight-carrying capacity dropped 10.6%. On June 1, 1971, ownership stood at 175,496 cars.

— In addition to thousands of "rolling rejects," PC's trustees found 2,000 cars inventoried serviceable which in fact were in bad order but not listed so, because the cars still belonged to a financing company under an unexpired leasing arrangement. (When the trustees bad ordered the cars, the correction caused the road's bad order ratio to go to 7.6% from 6.1% in September, 1970.)

— PC ownership of open-top hopper cars for coal declined from 75,093 to 57,343 from 1965-1970, or 24%. ("It is a startling fact," declared Langdon, "that in 1968, 1969, and 1970, PC did not add a single new hopper car to its fleet.")

— As a result, in 1970 PC could not supply equipment for 123,368 carloads of coal, losing nearly $21 million in gross revenue.

— Tonnage of grain and grain products originated by PC declined by 37% since 1964, while other Eastern rails' tonnage remained stable. This was coupled with a "drastic" decline in ownership of plain box cars, even though PC's fleet of hi-cube covered hopper cars grew to 1,790 by 1970. In 1970, PC lost $4 million in gross revenue by inability to supply equipment to grain shippers.

— In 1971, PC will lose more than $35 million ($12 million from coal) in gross revenues by inability to fill car orders.

The ACI Scanner

Initially, ACI applications were in the area of data enhancement . . . with specific assignments such as proving out manually prepared consists and flagging errors, on an exclusive basis.

Since those "early days" a few months ago, we've been able to take some giant steps. Today, ACI Systems Corp Scanners are performing the vital railroad *status change* functions which only yesterday were performed manually, if at all. To accomplish this, we have moved ACI Scanners *where the action is.* In effect, our ACI Scanners have become silent monitors, determining where the cars go . . . and then measuring the amount of work performed to permit highly sophisticated service evaluation which was previously impossible or economically impractical.

Wheel sensors interfaced with ACI Scanners count car axles, as well as provide direction over each switch. End product is a constant, precise inventory of cars wherever they stand. Weigh in motion scales, hot box, dragging equipment, broken flange and loose wheel detection interface provide digital output of data for automated billing and operations use in preventing accidents.

(to be continued next issue)

W. H. Thompson

W. H. Thompson
President

ACI SYSTEMS CORP

200 S. Michigan Ave., Chicago, Illinois 60604
Phone: (312) 427-0236

Circle 7 on coupon page 43

Illinois approves transit-aid plans

For once, the pessimists were wrong. With only a few days remaining before adjournment of the Illinois legislature, the evenly-matched forces of Gov. Richard B. Ogilvie and Chicago Mayor Richard J. Daley got together—and a compromise transportation-aid package sailed through both houses on its way to the governor's desk. The governor got his $900-million bond issue program—$600 million for highways, $200 million for mass-transit aid and $100 million for airport construction and expansion. The mayor got a subsidy to be applied to operating deficits of the Chicago Transit Authority.

Under the compromise plan, CTA is in line to receive $19 million—if local government comes up with 50% of that figure, or $9.5 million. The total, $28.5 million, just about equals the projected operating loss for CTA in 1971. With passage of the subsidy plan, CTA officers—and patrons—began breathing a little easier: Without subsidy, another fare increase would have been inevitable. CTA cautioned, however, that the legislative action—however welcome—does not represent a permanent solution to the system's financial problems. The subsidy legislation, at this point, represents a one-shot proposition.

Over-all, the transportation-aid package calls for $32 million (including the CTA $19 million), with bus operators and commuter railroads eligible to share. Legislators also noted the possibility of using part of the money to restore rail passenger service, under Amtrak, to such points as Danville, Decatur, Quincy, Savanna and East Dubuque, all of which lost service when Amtrak took over on May 1. Still another provision of the program would permit aid to non-Amtrak intercity passenger operations—of which the state has two, Rock Island's Chicago-Peoria and Chicago-Rock Island trains. (At the time it announced its stay-out decision on Amtrak, RI suggested that civic leaders in the communities served might investigate the possibilities of providing aid, and RI supported passage of the non-Amtrak-aid amendment.)

In terms of new capital programs which may be made possible under the state program, CTA led off by authorizing application to DOT for Federal grants covering the first two years of a capital-improvement program stretching through 1975. Over-all, the plan adds up to more than $250 million.

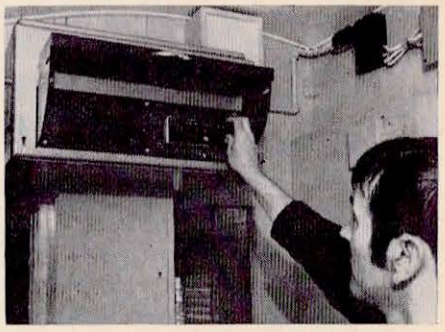
In the $105-million first phase (hopefully, to be financed on a two-thirds Federal, one-third state basis), CTA would acquire 1,000 new buses and 100 new rapid-transit cars at a total cost estimated at $65 million. In addition, $13 million would go for station improvements, $8 million for track and structures improvements, and $5 million for modernization of communications, signaling and power-distribution facilities.

Any way you look at it, approval of the package has to be regarded as a triumph for the American political system—and for the art of compromise. For most of May and June, transportation-aid was in the headlines almost daily. It was a case of "He's up . . . no, he's down . . . no, he's up again." At one point, the whole program seemed to have been killed. Joint action by Republicans and Democrats revived it.

In a $900-million package, it's difficult to pick and choose elements that are more "key" than others. One that has to be recognized, however, is the hard-won agreement—for this session, at least—on the need for aid to cover operating deficits. That's a breakthrough.

British Rail uses automatic p.a. system

British Rail's intercity trains are being equipped with a fully automatic public address system which will provide passengers with information while the train is en route. The system utilizes pre-recorded messages broadcast automatically at preselected points along the route. An "audio navigator" (*photo*) triggers off the broadcasts by automatically correlating distance information contained on the cassette tapes with the actual distance travelled by the train.



The system was developed jointly by British Rail and Ripper Robots Ltd. of Cranfield, which is completing delivery of an initial order for 70 audio navigator units for the railway.

Rail earnings near rock-bottom despite record revenues

Railroads have reported record first-quarter revenues of $3.1 billion, up 10.9% from the $2.8 billion of a year earlier. But a 9% increase in expenses, taxes and equipment rents wiped out most of the gain and ordinary (net) income was only $35.9 million—a figure that looks good only in comparison with the $14.5 million reported a year ago. For the 12 months ended March 31, rate of return on investment was 1.93%, down from 2.07% for the 12 months ended March 31, 1970.

Of 69 reporting Class I railroads, 22 operated in the red in the first quarter—13 in the East, 9 in the West.

Along with the first-quarter earnings report, the Association of American Railroads issued revised figures for the full year 1970 resulting from accounting adjustments required by the Interstate Commerce Commission. Operating revenues in 1970 totaled $12.0 billion, compared with $11.4 billion in 1969. Operating expenses increased from $9.0 billion in 1969 to $9.7 billion in 1970. Net railway operating income declined from $658.2 million to $485 million; ordinary (net) income was down from $507.3 million to $226.6 million. Rate of return for 1970 was 1.73%.

FIRST-QUARTER EARNINGS—U.S. CLASS I RAILROADS
(1971 vs. 1970)

	1971 (millions)	1970 (millions)	Per cent increase
Operating revenues	$3,121.5	$2,814.9	10.9
Operating expenses	2,511.1	2,334.5	7.6
Tax accruals	287.6	242.2	18.8
Rents (net debit)	205.9	179.6	14.7
Net railway operating income	116.9	58.7	99.1
Rate of return*	1.93%	2.07%	—
Ordinary income**			
United States	35.9	14.5	147.3
Eastern District	Def. 79.0	Def. 77.1	Def.
Southern District	44.9	32.4	38.7
Western District	69.9	59.2	18.1

d—Decrease
Def.—Deficit
* For 12 months ended March 31
** Net income before extraordinary and prior period items.

Amtrak revises timetable to reflect changes since May 1

Amtrak's second timetable effective July 12 shows many changes since the first timetable was published May 1. Half a million copies are in print.

It includes the new daily through train between Chicago and New York via the old Twentieth Century route, constituting reinstated service between Buffalo and Chicago and serving Erie, Cleveland and Toledo. This service was restored May 10. The connecting service from Toledo to Detroit, which was restored June 1, has disappeared.

Through train service has been established between New York and Boston by way of Worcester and Springfield.

An experimental tri-weekly train between Minneapolis and Spokane via the former Northern Pacific route, which began June 17, is shown in the new timetable.

Train service between Cincinnati, Richmond and Newport News, with connecting train service to Washington, and bus service to Norfolk, has been adjusted eastbound to connect with the James Whitcomb Riley from Chicago. The sleeper, diner lounge and coaches now run through from Chicago to Newport News.

Among a number of schedule adjustments to improve service are revisions providing both morning and afternoon departures between Chicago and Detroit, revision of a Milwaukee-Chicago train to provide better connections at Chicago, and earlier arrival of the eastbound Super Chief at Kansas City to provide connections with the Spirit of St. Louis.

All Amtrak trains serving Chicago now use either Central Station or Union Station. A complementary taxi service has been established for passengers and hand baggage between these two stations.

Seattle-Portland daily trains are again making stops at Centralia and Kelso, adding 10 minutes to the running time. The Seattle-San Diego dining car which had been operating on this tri-weekly train is now cut off at Los Angeles.

Among other changes in the new timetable, the Washington-New Orleans service via Southern is now shown as "connecting intercity rail service"; all other intercity passenger runs are shown under this heading, including the Denver-Ogden service of the D&RGW, the Chicago, Peoria and Rock Island services of the CRI&P and the Atlanta-Augusta service of the Georgia Railroad.

St. Louis creates Transit Authority

St. Louis Mayor Alfonso J. Cervantes on July 2 announced the creation of the St. Louis Area Rapid Transit Authority—a body with very little authority but a big job: devising a plan for financing a $1.4-billion transit system, and then selling this plan to state legislators and the public.

The new authority has 13 members, including city and county officials plus such long-time transit promoters as Eugene F. Williams, Jr., president of St. Louis Union Trust Co., representing business interests; and James A. Van Sant, president of the Flex-O-Lite Division of General Steel Industries, representing Gov. Warren Hearnes.

The new authority was created by the East-West Gateway Coordinating Council, a regional body of which Mayor Cervantes is chairman. The effect was to transfer transit planning and promotion from the controversial and politically weak Bi-State Development Agency to a brand new group.

Behind this new tack lies the fact that rapid-transit planning in St. Louis has come to a virtual standstill. Four consulting firms have completed their studies and have come up with a proposal for an 86-mile rail system. The proposal is to be formally announced later this month. But meanwhile, the State of Missouri has refused to appropriate $750,000 as the local share of continuing engineering and design studies. As a result, matching DOT funds have been lost.

It's hoped that the newly-constituted group can use its political muscle and financial expertise to get the transit master plan back on the tracks.

B&O to New York: One transit system

New York's Metropolitan Transportation Authority on July 1 formally took possession of the 14 mile, 120-year-old Staten Island Rapid Transit system, having paid the Baltimore & Ohio $3.5 million for lock, stock and roadway. C&O/B&O President Hays T. Watkins, Jr., turned over a symbolic deed to New York Deputy Mayor Timothy W. Costello, who in turn gave MTA Chairman William J. Ronan a silver motorman's control handle (*photo*). The takeover was arranged some time ago, and MTA has already ordered 52 new cars for SIRT from St. Louis Car Division of General Steel Industries.

Geeslin

Pomphrey

Rail p.r. men name Geeslin, Pomphrey

William F. Geeslin, assistant vice president of Southern, is the new president of the Railroad Public Relations Association, succeeding William C. Burk, manager-public relations of Santa Fe. Martin M. Pomphrey, assistant to the president of Frisco, was named senior vice president—a new position created to provide a line of succession to the presidency and thus to provide greater continuity in RPRA leadership. Regional vice presidents of the association are Willis W. Cook, Chesapeake & Ohio/Baltimore & Ohio; C. C. Dilley, Milwaukee Road; and Joseph J. Gaynor, Kentucky & Indiana Terminal.

Railroad police need help, says PC

With a budget of more than $10 million a year, and with 790 persons on its payroll, Penn Central's Security Department ranks as the nation's largest private police agency. Even so, PC has told the U.S. Senate's Select Committee on Small Business, it needs help in coping with a worsening problem of theft, pilferage and vandalism.

In recent testimony, PC's director of security, Donald L. Nelson, described incidents that occurred "in three small areas within the City of New York" during April and May of this year: Gangs of marauders, up to 300 in number, attacked PC freight trains; there were 247 thefts from box cars; six cars were completely emptied of their contents; eight were emptied of one-half of their contents; six were set afire; of the $456,000 in merchandise stolen and burned, only $14,755 was recovered; 281 persons were arrested, including 163 juveniles.

PC's problem is compounded, said Nelson, by the fact that it serves 53 cities with populations exceeding 100,000—and "most of these have experienced high crime rates."

For all of 1970, 12,489 offenses were reported to PC's Security Department and 8,059 persons were arrested, including 254 employees. There were 253 apprehensions for obstructions on rails; 290 for tampering with switches and signals; 1,173 for stonings of trains. But there were 1,258 reported instances of obstructions on rails, 1,984 instances of tampering with switches and signals, 3,439 stonings and 5,809 thefts.

Nelson proposed the following changes "which we full well realize would not solve the problem but at least would reduce it to a size which can be coped with easier":

1. Additional Federal funding of police departments on the local level with emphasis on increased manpower and more effective training programs. Also, more community relations activities supported with Federal funds. And "there should be consideration given on the local level to tax credits due to our maintaining such a large police agency with what are actually dual responsibilities."

2. Railroad police should be granted Federal police commissions "so that they may cross state lines in the pursuit of their normal activities."

3. Railroad police "should be able to participate in the various training programs available to public police and sponsored by the Law Enforcement Assistance Administration, without charge or at least at minimal expense."

4. "We would like to receive more realistic handling and disposition of our criminal cases in many of the courts throughout our territory."

The Senate Small Business Committee—which estimates that theft, pilferage and hijacking of truck, air, rail and ship cargo in 1970 caused losses totalling $1.5 billion—began its investigations in 1969. The committee says it is "seeking to weigh the loss impact on the business shipping public who relies on these carriers." Interest in the problem has also been shown by the Senate Commerce Committee and the Senate Permanent Investigations Subcommittee.

Meanwhile, DOT Secretary John A. Volpe has announced the creation within the Department of an Office of Transport Security to be headed by Lt.-Gen. Benjamin O. Davis (USAF, ret.), who will have the title of Acting Assistant Secretary for Safety and Consumer Affairs.

ASEA will equip Colorado mining road

ASEA Inc., U.S. subsidiary of the Swedish manufacturer of electrical equipment, says it will supply all equipment for a 14-mile, 42-in.-gauge mining railroad to be built by the Climax Molybdenum Co. at its Henderson Mine in Colorado.

The order placed with ASEA calls for 24 50-ton DC electric locomotives with thyristor chopper controls, 180 ore cars, six DC power supply substations, automatic train control, optical signaling systems, data transmission systems, and CTC dispatching and monitoring boards.

The system will bring molybdenite-bearing ore up from the loading level of the Henderson Mine, located deep beneath the Rocky Mountains at an elevation of 7,500 feet, by way of a 10-mile-long tunnel climbing at a gradient of 3% to the portal, on the opposite side of the Continental Divide, and thence along a four-mile right-of-way on the surface to the crusher and processing plant at an elevation of 9,000 feet.

The entire 14 miles of railway will be double-tracked.

WP posts profit; plans to diversify

Western Pacific President Alfred E. Perlman had some good news for shareholders at their annual meeting in San Francisco June 30: "The complete reorientation of the new management has resulted in a profit for the first six months of this year compared with the $2.7-million loss in the same period in 1970."

Perlman attributed the turnaround to management's use of new marketing techniques, improved freight service, increased mechanization, improved freight-car utilization, cost controls, and an intensified safety program.

WP Chairman Howard A. Newman, meanwhile, reported that owners of about 84% of the outstanding shares of the Western Pacific Railroad Co. had accepted the exchange offer of Western Pacific Industries Inc. Industries is offering one share of its common stock for each share of WP Railroad common.

Newman added: "Following completion of our proposed financing we will activate a program into business activities which are less cyclical than the railroad business. Generally our goal will be to acquire companies which appear to offer a superior return on invested capital, stability of earning power and excellent continuing management. Inherent in our diversification concept will be an attempt to uncover opportunities for the commitment of our stockholders' resources in areas which do not possess the capital intensive, labor intensive and regulatory characteristics of the railroad industry."

Milwaukee Road sets terms for exchange

When the Milwaukee Road establishes a holding company, Chicago Milwaukee Corp., to become the parent of the railroad and its subsidiaries (RA, May 31, p. 8), these will be the exchange terms: CMC will offer one share of its common for each share of railroad common, and one share of a 6% convertible, non-cumulative prior preferred for each share of railroad preferred. In addition, railroad stockholders will be offered the non-transferable right to subscribe for one warrant for each two shares of common or preferred tendered in acceptance of the exchange offer. Subscription price and exercise price of the warrants will be determined at the time of the offering.

Watching Washington

TAX CREDIT NOW?

REID BEDDOW

The cat may be let out of the bag this week on Rep. Wilbur D. Mills' plans for restoration of the investment tax credit. Mills journeys to Ogden, Utah, this Friday, July 16, for a Democratic fund-raising dinner; informed sources say he will use the forum to unveil a tax cut package. Their prediction is based on the likelihood of poor second-quarter GNP gains and a near 6% unemployment rate. The GNP gain in first quarter was $31 billion, a preliminary estimate for second quarter is a dismal $20.4 billion. If Mills —Congress's Mr. Taxation—calls for immediate enactment of a reinstated tax credit, he will directly oppose President Nixon who last month said he opposed any tax reductions. Mills also, it is said, will sweeten his plan with tax relief for individuals to gain anti-business Congressional votes.

NEAR MISS

A narrow escape by a Metroliner carrying 195 passengers June 25 has triggered a new Federal investigation of the passenger vandalism problem. Virtually unnoticed by the press, the incident occurred when the 6 p.m. Metroliner from Washington at 6:26 p.m. plowed into four truck tires, with rims, two on each track, going 80 mph in suburban Baltimore. First four cars of the six-car train were heavily damaged (initial appraisal: $25,000); and, says a PC officer, "It's a miracle there wasn't a derailment." FBI, FRA, and National Transportation Safety Board investigators immediately began an inquiry under an ancient "Jesse James" clause of the Federal Code which makes it illegal for anyone to impede or endanger the flow of interstate commerce. First reaction by angry rail men involved was to ask whether weapons should not be carried by train crewmen.

SHORT LINES

Amtrak is developing plans to send a Turbotrain on a nationwide tour . . . Also, Amtrak—without a timetable to its name for eight weeks—has received a new printing of 500,000 copies and already has reordered a like amount . . . William E. Loftus has been named acting director of FRA's Office of Policy and Planning, replacing James MacAnanny who has resigned at 45 to relax on Maryland's Eastern Shore . . . Acting appointments seem to be a rule at FRA: Deputy Administrator Carl V. Lyon was acting administrator for almost a year before IC's John Ingram was nominated for the post; only in June was Myles B. Mitchell given permanent status as director of the Office of High Speed Ground Transportation, after having replaced Robert A. Nelson in December, 1969. Wishing everyone a happy new fiscal year, the Senate on June 30 confirmed the nominations of Commissioners Virgina Mae Brown, Dale W. Hardin and Lawrence K. Walrath for reappointment to the ICC. Earlier, it confirmed the nominations of Wythe D. Quarles, Jr., as management member of the Railroad Retirement Board, succeeding the late Thomas M. Healy. And, across town, the National Mediation Board renamed George S. Ives to continue as chairman for another year.

Lines on Labor

GUS WELTY

UTU FIRES THE FIRST SHOT

As the first half of 1971 slipped slowly below the horizon, garbage collectors were on strike in Detroit . . . airport-bus drivers in San Francisco . . . copper workers in eight states . . . and longshoremen up and down the Pacific Coast. The threat of a steel strike hung over the nation. A walkout of coal miners, later on, seemed quite possible. And, right on schedule, along came the United Transportation Union with its two-week notice of strikes against Union Pacific, Southern and Chicago & North Western.

UTU's action was hardly unexpected. One report had the union making its announcement as early as June 20. And once this turned out to be a false-alarm, it became possible to piece together (from a variety of sources) a reasonable set of probabilities. First, it seemed almost certain that UTU would turn away from its originally-announced targets (Burlington Northern and Seaboard Coast Line) and pick new ones. UP and Southern were mentioned early-on as likely candidates. Second, it seemed probable that the union—still keeping it selective—would hit more than two railroads. There was some mild surprise, in fact, when only C&NW was added —though UTU President Charles Luna did raise the possibility of striking elsewhere "if necessary." Third, it was a good bet that if no agreement was reached in conferences scheduled for June 24-25, UTU would set the strike-clock ticking along about the middle of the following week. And the union's announcement was dated Wednesday, June 30.

THE RAILROADS MAKE THEIR CHOICE

On the carrier's side, the possibilities were somewhat more limited. Only two basic reactions seemed immediately available—promulgation of work-rule changes and/or notice of a lockout. Promulgation was the initial choice, with the railroads planning to place in effect changes recommended by Emergency Board 178 and already accepted by the other operating union, the Brotherhood of Locomotive Engineers.

ACTION SPAWNS REACTION . . . AND REACTION

In a number of ways, UTU's strike call raised new questions. Was there a possibility of settlement within the two-week-notice period? Observers noted that further conferences had been scheduled (for July 7) before the union put UP, Southern and C&NW under the gun. Would the Supreme Court's "other" decision have a bearing? The Court had, in fact, approved the concept of selective strikes—but it had also sanctioned injunctive relief in cases where a union did not exert "every reasonable effort" to reach a settlement. What significance, if any, might the calendar have? UTU's "hit" date falls three weeks ahead of scheduled Congressional vacation-time—and a bit more than three weeks in advance of UTU's Miami Beach convention, at which delegates will (among other things) name a successor to President Luna. And, of course, there was the biggest question of all: What happens if (1) UTU does strike and (2) the railroads do promulgate? Or, to confuse things further, what would be UTU's reaction to the railroads' reaction to UTU's action?

Hearings set on labor bills

The House Interstate and Foreign Commerce Committee will begin hearings late this month on proposals to amend the Railroad Labor and Taft Hartley acts.

Congress recesses for a month Aug. 9, so no action on any bill is expected until this fall at least.

The Nixon Administration has asked Congress to amend the two labor acts to extend the cooling-off period in rail disputes and provide for acceptance of a "final, best offer." AAR and the Air Transportation Association have endorsed a similar proposal. In addition, scores of Congressmen have introduced variations.

Rep. Jake Pickle (D.-Tex.) told a TAA luncheon July 1 that any bill would be in committee a long time, and that witnesses would total above 100.

"The issue will probably be decided by one vote in the Transportation Subcommittee," said Rep. Pickle. "Neither side will be happy with the result. It is likely that Congress won't pass any legislation until the American people are made to suffer."

Rail retirement benefits hiked

Congress passed and sent to President Nixon a bill extending a temporary 15% increase in rail retirement benefits until June 30, 1973, and adding another temporary increase of 10%, also to expire in 1973.

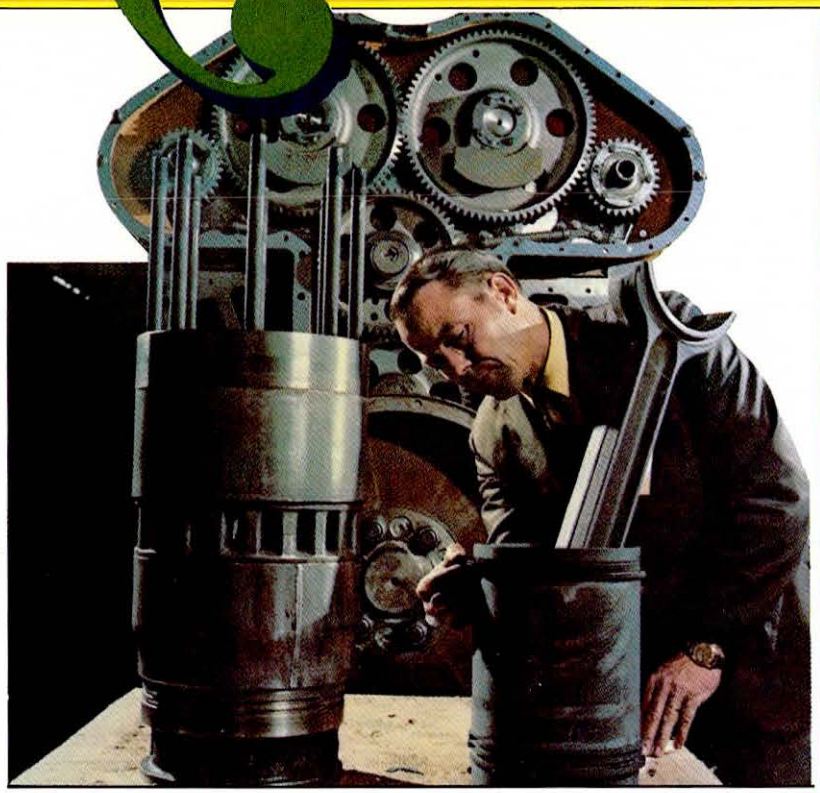
The interim 15% rise was to have expired on June 30, 1972. Its extension for another year was coupled with giving the Commission on Railroad Retirement another year to complete its report. The commission, created in 1970, was to have finished its report on reform of the railroad retirement system last month, but asked Congress for more time in view of the fact that commission members and staff were only formed this January. The commission now must file recommendations by July 1, 1972.

The additional temporary 10% increase is retroactive to Jan. 1, 1971.

The 15% hike, approved by Congress last year, and the new 10% hike impose a hefty drain on the retirement fund, whose depletion is predicted in 20 years. The fund contained $4.1 billion on May 1 this year. Benefits are currently paid to 998,000 workers, and 620,000 active rail workers pay into the fund.

LUBRICATION ENGINEERING

NEWS



Pistons and rings give longer service when lubricated with CITGO RD-836 Diesel Engine Oil

New, improved railroad lubricants under development at mile-long Cities Service research center

Cities Service Oil Company maintains an aggressive and continuing research and development program at the Cities Service Research Center complex near Princeton, New Jersey. Improved products for railroad applications, both on track and off, are under constant development and testing. Within the past two years alone, superior lubricants have been introduced for a number of different applications. In

many cases, these advanced railroad lubes have taken the place of two or more previous products and thus served to shorten the list of "required" lubricants in customers' inventories.

For information on specific products now under development and available for test application programs, drop a line to L. M. Fleming, Transportation, Sales Department, Cities Service Oil Company, Box 300, Tulsa, Oklahoma 74102.

The promise of pulling more tonnage with fewer units and a resultant decrease in maintenance costs has remained little more than a promise in many cases. Higher horsepower diesel engines place greater demands on the crankcase oil and on those moving parts whose life depends on effective lubrication. Conventional high dispersant diesel lube oils just couldn't handle the load. Something better had to be developed.

That something better turned out to be CITGO RD-836, specifically formulated to get the maximum usage from each new high horsepower engine. RD-836 withstands more heat for longer periods; neutralizes greater amounts of acid; keeps oil filters and engine surfaces cleaner. Wear is reduced and oil life is significantly extended, resulting in less downtime and lower maintenance costs.

Thirteen major railroads are now using CITGO RD-836. In case after case, examination of pistons, rings and cylinders following thousands of hours of operation shows virtually no wear.

Oustanding reserve alkalinity and stability

Among the properties which enhance the performance capabilities of CITGO RD-836 diesel engine oil include excellent reserve alkalinity for extended TBN retention, very fine compatibility with other approved diesel engine oils and unusual stability, which helps eliminate clutch slippage.

In addition to these qualities, RD-836 also possesses exceptional anti-rust and anti-foam properties provided by special components in the additive package. The superior grade medium VI base stocks contribute exceptional oxidation stability and anti-wear protection along with good silver lubricity.

Dispersant, detergent keep engine parts clean, filters free-flowing.

An ashless dispersant and a detergent additive are key ingredients in CITGO RD-836 diesel engine oil. Designed to provide both longer service intervals and extended filter life, its high dispersancy permits the

oil to flow readily through filter elements with a minimum of filter and oil cooler plugging. This is particularly important in the lubrication of engines equipped with by-pass valves, where particles in the unfiltered oil could otherwise settle out and cause abrasive damage to bearings.

CITGO RAILROAD LUBRICANTS EXCEED THE NEED.

CITGO

CITIES SERVICE COMPANY

CITGO-TRADEMARK CITIES SERVICE OIL CO. SUBSIDIARY OF CITIES SERVICE CO.

CITIES SERVICE OIL COMPANY

(918) 560-2842, Box 300, Tulsa, Oklahoma 74102

This advertisement appears in RAILWAY AGE, June, 14, 1971

TROUBLE

100 MILES AWAY!

Holmes Crane Gets There Fast...Clears Track...Hurries Back!

Right after the call . . . the dependable Holmes Crane is on its way . . . over the road or spurs . . . to re-rail cars or engines with 100,000 pounds of lift.

There's no waiting for block-to-block rail clearance or delays in rounding up crews. The Holmes mini-crew moves out in minutes . . . speeding over the highways to miss rail traffic . . . racing over interstates at 50 miles per hour . . . or rolling down spurs without damaging tracks.

Write today for the full story. Fill out the coupon for more information on the fast, Holmes Crane . . . the time-tested, high performance unit that does a dozen jobs and clears the track fast!

ERNEST HOLMES COMPANY

2505 EAST 43RD STREET, CHATTANOOGA, TENNESSEE 37407

ERNEST HOLMES CO. EH

FILL OUT . . . MAIL TODAY!

☐ Please send free brochure on the Ernest Holmes RC-50 Wrecking Crane

☐ Have representative call for appointment.

COMPANY_____ RAILROAD_____

NAME_____ TITLE_____

ADDRESS_____

CITY_____ STATE_____ ZIP_____

TELEPHONE NO._____

MAIL TO: Ernest Holmes Company/2505 East 43rd Street
Chattanooga, Tennessee 37407 Dept: RA
Phone: 615-624-0031 / ATTN: Mr. W. Frank Thomas

L&N rail-welding program moves into high gear

By MERWIN H. DICK, Engineering Editor

Railroad engineering officers in general are excited about a project just completed on the Louisville & Nashville at Nashville. One manifestation: Two committees of the American Railway Engineering Association scheduled meetings to be held at Nashville July 12 so that they might inspect a new facility. (The two AREA groups are Committee 22, Economics of Railway Construction and Maintenance, and Committee 31, Continuous Welded Rail.)

What these committees have been looking forward to seeing at Nashville is a rail-welding complex that incorporates many new and distinctive features. These include:

—An automated and computerized system (RA, June 14, p. 50), designed and manufactured by Sperry Division, Automation Industries, Inc., that makes use of ultrasonics to detect internal defects in rails and also to measure wear, kinks and bends with the aim of classifying the rails for further possible use.

—The latest Chemetron electric flash butt-welding machine (System Schlatter) which incorporates a number of advanced auxiliary features including a newly designed unit for semi-automatically grinding the areas on the ball and base of the rail where the welding-machine electrodes come into contact with the rail metal. Also included in the welding production line is a rail pusher of improved design. This unit propels the strings of welded rails onto the rail train.

—A mammoth traveling gantry crane of advanced design, which has a runway 1,100 feet long and a transverse travel of 182 feet 6 inches. It is capable of serving every foot of the rail handling, storage and welding facility.

—A system of powered conveyors which, in conjunction with a series of surge tables and rail skids, facilitates handling rails through the various stations and on to the welding machine with a minimum of manual handling and attendance.

—A floodlighting system that incorporates 48 1,000-watt floodlights and provides an illumination of 3 to 7 foot-candles in the general area. In addition there are twenty-one 1,000-watt lights on the gantry crane, which provide 20 foot-candles of illumination in the operating area of that facility. All wiring is underground.

● **The capabilities.** Combined, these features comprise a facility capable of receiving either new or secondhand rails, testing them automatically for kinks, bends or internal defects, straightening kinked or bent rails, cropping the ends from relay rails to be welded, then moving the rails, either by conveyor or from storage by the gantry crane, to the welding production line where they are converted into continuous lengths 1,440 feet long. As they come from the welder, these are loaded onto a rail train for transportation to the site of installation.

Built at a cost of $3 million, the rail-welding complex was completed June 28. A second welding production line is scheduled to go into service next January. During the construction period, an existing rail-welding plant was continued in operation on the location of the new plant at Radnor Yard near Nashville. The existing plant consisted of dual oxy-acetylene pressure-welding units, and was operated until May 19. The new welding machine went into operation May 20, somewhat in advance of over-all completion of the project.

Automated butt-welding facility will help convert all primary and secondary main tracks to welded rail.

● **Why it was built.** What motivated the railroad to undertake construction of the new facility? R. W. Pember, assistant chief engineer, explains that the railroad wanted to get set to carry out a program aimed at converting all primary and secondary main tracks to welded rail, either new or secondhand, by the end of a 14-year period.

The total mileage involved is about 6,000 miles. Since about 1,000 miles have already been laid with welded rail, the plan calls for welding and laying about 400 miles of new and relay rail each year for the next 13 to 15 years. The reasoning was that the railroad needed a modern, highly automated rail sorting, testing and welding plant if the required amount of welding was to be performed with maximum economy.

Responsibility for designing and supervising construction of the facility was placed on the shoulders of James L. Van Meter, project engineer—coordinator on the staff of J. I. Adams, chief engineer. In preparation for designing the facility, inspection trips were made to butt-welding plants on other railroads and studies were made of various types of materials-handling systems. When a design had been developed, its performance was subjected to a simulated run on the L&N's computer with satisfactory results.

Radnor Yard was chosen for the new facility because it is central to the entire system.

For the time being at least, L&N will continue to disjoint released rail in the field. All this rail, plus all new rail, is shipped in gondolas to the new plant, loaded in the cars in layers of 18 rails each. From the cars the rails are transferred to storage by the gantry crane which uses a magnet to handle up to 18 rails, in increments of six rails, at a time.

● **Rails moved by conveyors.** Relay rails scheduled to be put through the measuring, testing, cropping and welding procedure are removed from storage by the gantry crane and placed on a surge table at the beginning end of the production line. From this table they are taken from point to point on powered roller conveyors that move at a rate of 120 feet per minute. The first operation to which the rails are subjected is the cleaning of the top surfaces by a wire-wheel assembly capable of removing scale, dirt and minor grease deposits to the degree required for ultrasonic testing. They are then ultrasonically measured for kinks, bends and wear and tested for internal defects.

Measurement for kinks and bends comes first. Rails that have these defects in excess of set tolerances are not tested right away for wear and internal defects but are automatically ejected onto a surge table from which they pass to an F&H rail straightener. After being straightened they are recycled through the ultrasonic measuring and testing station.

● **Measuring for wear.** Rails that

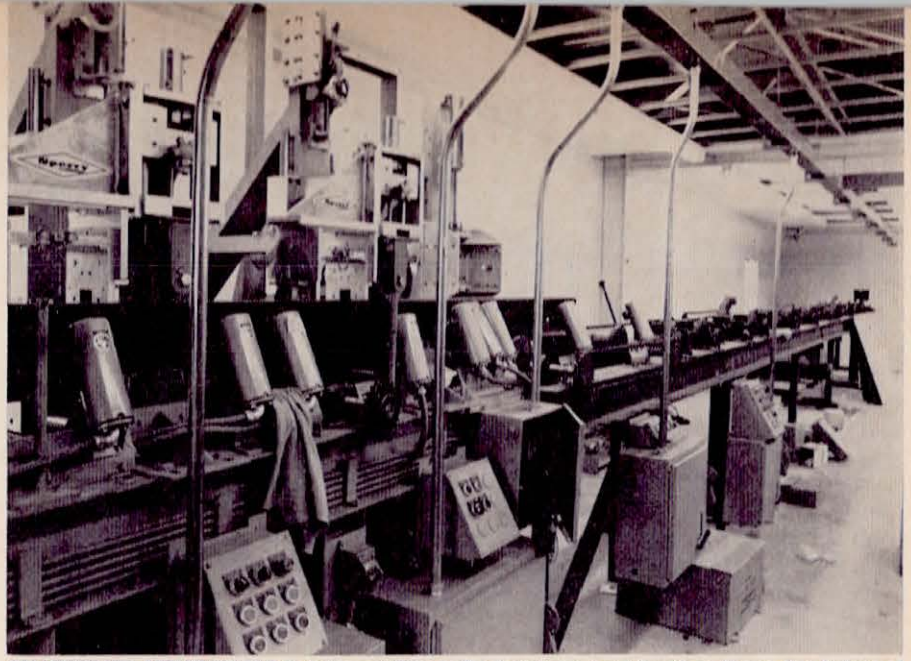
pass the bend and kink test come next to a station where they are subjected to measurement of head wear, gauge wear and over-roll. These measurements are made in ⅛-inch increments by ultrasonic transducers placed in various positions around the rail. Rails found to have wear of ½-inch or more in any dimension are automatically ejected to skid table No. 1, the reject table. All other rails are automatically ejected onto one of three other skid tables in accordance with the amount they are worn, regardless of whether it is head wear, gauge wear or over-roll.

All these rails are later rerouted through the measuring system to match them according to wear in a particular dimension. These rails are automatically ejected to Skids 2, 3 and 4 in accordance with their wear classification. With the rails thus matched according to the maximum wear in a particular dimension, a decision can be made regarding their future use. They may be classified for use for bolted construction in yard tracks, for emergency use, for construction of track panels or for cropping and welding for use in secondary tracks. If the latter, the rail is returned to the production line for cropping and welding. The cropping is done by a Chemetron-Arsco abrasive saw that cuts up to 18 inches from the ends. An auxiliary saw is available if needed.

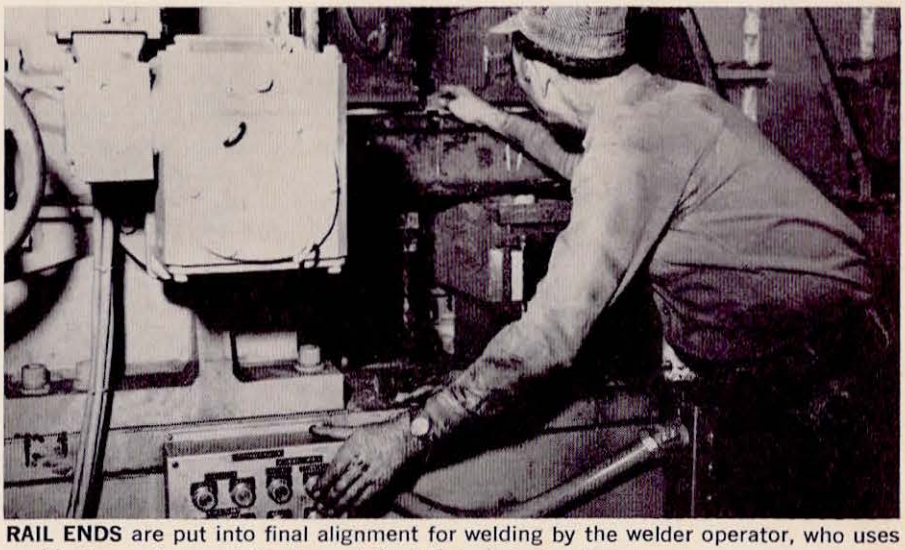
● **Finding internal defects.** While the rails are being initially measured for wear, they also pass a station where they are ultrasonically tested for internal defects. This part of the system makes use of two roller search units designed to locate transverse defects, detail fractures, engine-burn fractures or transverse separations developing from thermal cracks, horizontal split heads, vertical split heads, head-and-web separations and joint defects. In all cases the system is set to signal the presence of a defect if it exceeds or conforms to pre-determined criteria. Rails with such defects are automatically ejected onto the reject skid.

A paint-spray system automatically marks the location of a defect and indicates whether it is in the head or web section. Relay rails slated to be cropped are not tested in the joint-bar areas.

● **What computer does.** Information furnished by the ultrasonic stations is fed to a computer control system which, among other things, controls the paint-spray system. It also causes the functioning of controls in the conveyor system that cause the rails to be shunted onto the proper skids or tables, depending on their wear and the presence of kinks, bends or internal defects.



AUTOMATIC EQUIPMENT for measuring rails for wear and testing them for internal defects was partially installed when this photograph was taken.



RAIL ENDS are put into final alignment for welding by the welder operator, who uses pushbuttons shown at the lower left of the photograph.

The computer also provides for stopping the conveyor system if any malfunction occurs, causes each rail to be tracked through the various stations by means of panel lights, and indicates the number of rails on each skid or table for a continuous 16-hour period.

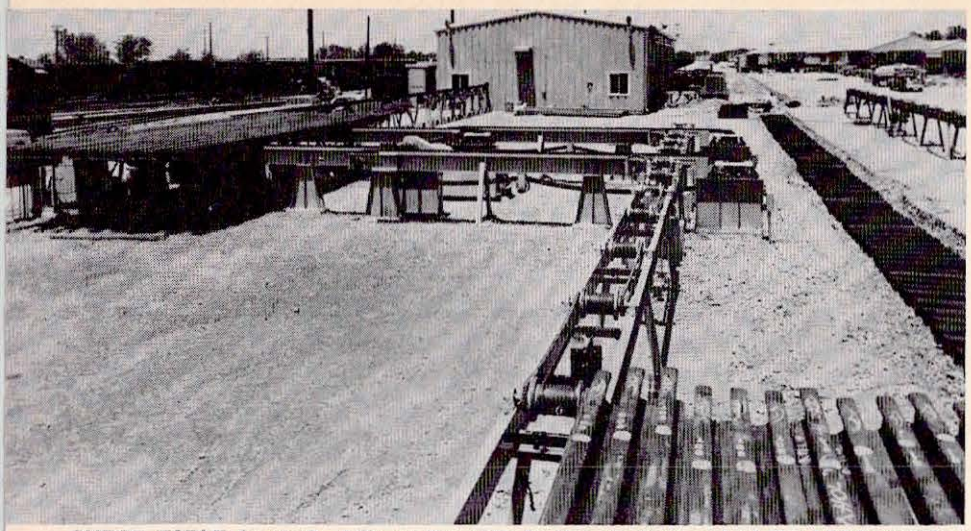
Attendance at the measuring and testing section consists of one man, needed only if the system stops. In which case, his function is to determine the cause of the trouble and correct it.

If there is no relay rail for testing and sorting, plans are to route new rail through the ultrasonic measuring and testing system. It will be tested for bends and kinks and also for internal defects. "By testing new rails in this manner we will have more control over what we get from the steel companies," explains Van Meter.

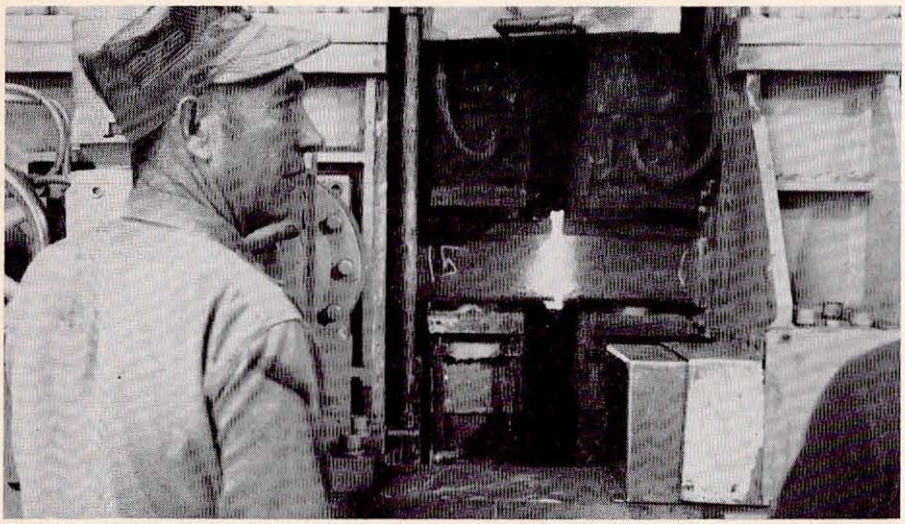
● **The welding machine.** The electric flash butt-welding machine L&N has installed at Nashville is the latest Chemetron model—a high-capacity machine capable of welding rails ranging in weight from 90 pounds to 155 pounds and in length from 25 feet to 39 feet.

Rails to be welded are delivered by the powered conveyor or the gantry crane to a surge table at the head end of the welding production line. From this table they move onto a conveyor line that delivers them to the welder. In making this movement they pass through a lift-and-turn device by means of which they can be turned 180 degrees if it is considered necessary to reverse the position of the rail.

In making welds by the electric-flash process, the rail ends to be welded are clamped in platens and electrodes are attached to them. After the rails have been brought into alignment, the welding current is turned on and the tem-



SURGE TABLE (center), delivers the rails to the starting end of the L&N's welding production line. Welder is in building shown in background.



A FINISHED WELD is shown here before the excess upset metal has been sheared off. At this point, the weld will be ground and tested for defects.

perature of the ends is brought up to a point that will sustain flashing, an action in which the end faces of the rails are burned away while they are being moved together and apart at a controlled speed. At the proper moment the rail ends are squeezed together by a hammer-like blow of sufficient force to produce the weld.

Immediately after the welding current is turned off, a shearing device is actuated to remove the excess upset metal from the hot weld. The weld is now complete except for grinding and the rails are moved forward, making the machine available for the next weld.

● **Improved rail pusher.** The reversible rail pusher device used with the welding machine at Nashville is of an improved design. As with earlier designs, the pusher uses a crawler-type propulsion device that bears against the underside of the rail. However, the opposed idler part of the pusher bearing on top of the rail, instead of being of the crawler type, consists of four flanged crane-type wheels.

The result is an increase in thrust, a spokesman says. The pusher, hydraulically driven, is capable of exerting about 20,000 pounds of thrust. It will move a 1,440-foot length of welded rail at variable speeds up to 120 feet per minute.

Grinding of new welds is done by equipment that operates semi-automatically. All welds are inspected for defects by a Magnaflux magnetic-particle test unit.

As a welded rail grows in length, it is guided into the proper pocket in the rail train through a series of motorized adjustable lead-out stands. A feature of the lead-out portion of the facility is that the rail-train track is depressed two feet below the base elevation of the welding plant. It is pointed out that this permits rail to be fed directly into the middle tier on the rail train without undergoing any deflection angle.

Only five men are required for operating the welder and related equipment: a welder operator, a welder helper, a grinder operator, a man for operating the particle-testing unit and a man to guide the forward ends of the long rails as they are pushed onto the rail train.

● **Operating personnel.** The rail measuring and testing equipment is operated a single shift daily, but the welder and the gantry crane are operated two shifts. A total of 33 men is required to operate the plant for the two shifts. This includes supervision, which consists of a superintendent, an assistant superintendent for the first shift and an assistant to the superintendent for the second shift.

For the two shifts the plant is expected to produce 300 welds daily. After the second production line goes into operation next January, average daily production is expected to reach 450 to 600 welds, depending on the number of shifts worked.

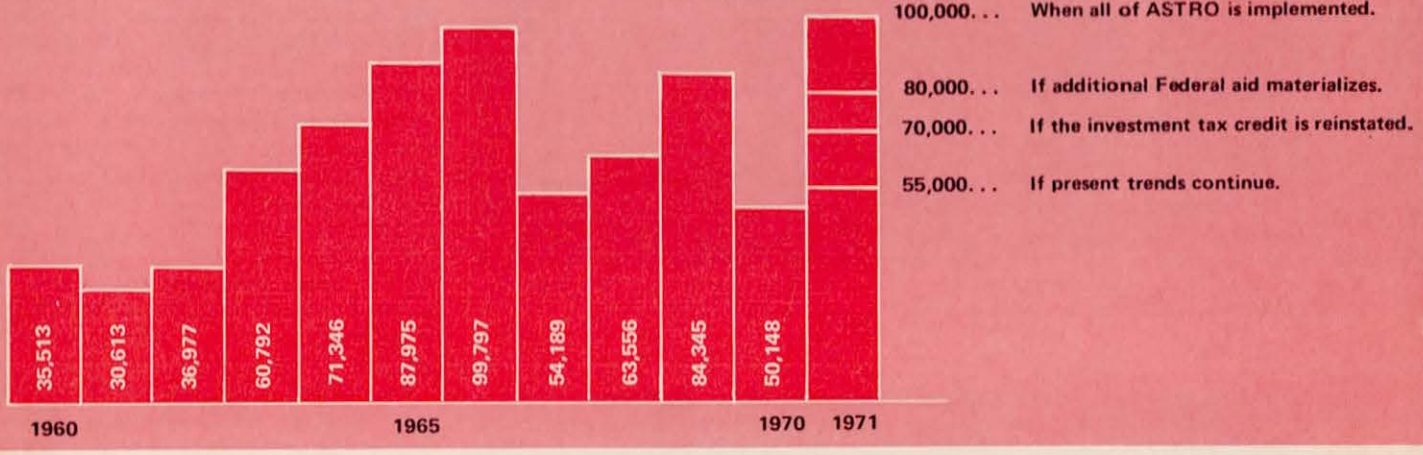
The project required construction of eight Armco buildings. The largest is that housing the welding machine and auxiliary equipment. This structure is 150 feet 8 inches long, 40 feet wide and 16 feet high. A special feature is that the roof panels over the welding machine are removable. Thus, if necessary, the head of the welding machine can be lifted out of the building by the gantry crane for repairs. The air conditioned building housing the ultrasonic test equipment is 64 feet long and 16 feet wide.

Among the companies participating in the design and construction of the new facility, Chemetron Corp., Railway Products Division, served as the prime contractor for the conveyors, welding machine and related equipment, with the Link Belt Co. supplying the conveyors, surge tables and rail skids. Sperry Rail Service, a division of Automation Industries, Inc., furnished the ultrasonic measuring and testing system. The Crane Manufacturing & Service Co., Cudahy, Wis., furnished and erected the gantry crane. The rail straightener was supplied by the Stanley H. Smith Co., Cleveland, Ohio.

L&N performed all track work, erected most of the buildings and served as the basic prime contractor for the entire project. General supervision over the entire undertaking was exercised by Chief Engineer Adams, assisted by Assistant Chief Engineer Pember, C. E. Stoecker, planning and construction engineer, and L. A. Logsdon, engineer of track. ■

RAILROADS AT MIDYEAR:

The Freight-Car Market — If...



A united industry sees signs of a breakthrough

By **REID BEDDOW,** Washington Editor

At long last it seemed in Washington that something very big was about to break loose for rails. There had been stirrings all spring. DOT officials with packed brief cases ran from agency to agency. Anonymous White House special assistants grappled with the formidable intricacies of railroad accounting. AAR President Stephen Ailes and former Senator George A. Smathers, ASTRO's general counsel, disappeared into closed-door meetings. RPI President Nils A. Lennartson was ubiquitous. FRA Administrator-designate John Ingram commuted from Chicago to stay abreast of developments.

Often it appeared that railroad presidents spent more time in the capital than on their properties: the private rail car of Penn Central President William H. Moore became almost a tourist attraction at Union Station. Amid all the flutterings, rumors, consultations and debate, at length came this word:

—A broad, Administration-backed rail assistance proposal—the boldest ever advanced by any Administration—would soon join the industry's own ASTRO recommendations in Congress.

—At the prodding of Congress, domestic surface carriers—rail, truck and barge—had agreed on common legislative goals. This historic, unprecedented agreement virtually assured, in the words of one high-level observer, passage of important elements of what has come to be known in Washington as "the railroad survival kit" (see box, facing page).

● **The wolf at the door.** Signs of a genuine turnaround in railroad fortunes in Washington, after many a false alarm and dashed hope, come not a moment too soon. While there are many bright spots around the country. especially in the West and South, the over-all picture remains dismal.

Class I railroads finished 1970 with a rate of return on net investment of only 1.7%, lowest since 1932. With a modest recovery by Penn Central, railroads could finish 1971 with a return of 2.4%—still desperately low for an industry with a net investment of $28 billion. Railroad men across the country have been worried about "domino" bankruptcies in the wake of Penn Central.

Nationalization suddenly has become a vivid specter, with three governmental arms—the Department of Transportation, Interstate Commerce Commission and the Senate Commerce Committee—drawing up plans for just that contingency.

As recently as June 29, DOT Assistant Secretary Charles D. Baker warned Congress, "Absent major change; absent legislative, executive [Administration], and industry leadership; absent labor-management vision; absent shipper-user involvement and concern, the railroad system is headed rapidly downhill and the prospects for the 70's and 80's become bleak indeed."

● **What's new.** Out of this very bleakness has come hope. "This has *got* to be the year for railroads," one DOT official told Railway Age.

There is now rising belief in Washington that this *will* be the year, a watershed *annus mirabilis* during which railroads will finally win reforms in regulation and needed Federal support and incentives long enjoyed by other modes. If this is the year, credit for the victory will go in no small part to those rail men who have labored long and hard for many months, along with their suppliers and their customers, to bring railroad problems—and railroad potential—to the public attention as never before (see page 25).

Proposed legislation, among other things, would give railroads more freedom to price their services, a freer hand to prune away excess lines (Penn

WASHINGTON'S "RAILROAD SURVIVAL KIT"

EQUIPMENT FINANCING

Railroads say they need to order 100,000 new freight cars a year; the current rate of ordering is around 55,000. DOT puts minimal new-car needs at 80,000 a year for the decade, even assuming a continuing decline in the railroad share of the total freight package. Both the railroads and DOT see an urgent need to beef up locomotive fleets.

Reinstatement of the **investment tax credit** at a rate of 10% for the first two years, then at 8% or 7% on a continuing basis, is supported by all regulated modes. It has important Congressional backing. If the new GNP report does not show substantial improvement, the tax credit has an excellent chance of swift reinstatement. This alone could add 10,000 new cars a year to order books.

Creation of a **Transportation Finance Corporation** modeled after the old RFC (which helped railroads to the tune of $1 billion in the 30s) has wide support, including that of railroads, truckers and water carriers. The TFC would help all carriers "who were unable to obtain necessary funds through normal commercial channels at reasonable rates of interest."

Federally-insured loans for equipment purchases are provided for in S. 1731, now the subject of Congressional hearings along with S. 1729 (the **Fastcor** bill) and S. 1730 (the **National Freight Car Corp.** bill). The Nixon Administration is leaning toward a modified version of S. 1731, which railroads strongly favor. It would authorize insurance of individual-road loans up to a total of $3 billion. Fastcor would also add up to $3 billion in equipment, but the government would control the resulting fleet. S. 1730 would create a private corporation to build and own a fleet of general-service cars to be rushed to critical car-shortage areas. This is supported by the National Industrial Traffic League, and by the railroads as an adjunct to S. 1731.

There is a strong feeling in Washington that one or a combination of these proposals will be passed this year. ("This year" is a key phrase in Washington because nobody expects meaningful legislation to be passed in a Presidential election year if it is at all controversial.)

ROADWAY MAINTENANCE

Prior to World War II, for every two dollars spent on maintenance of way, one dollar went into rolling stock. Today that ratio is reversed, hence the saying, "We're running tomorrow's trains on yesterday's track." While wanting to increase rolling-stock expenditures, both the railroads and the DOT are equally intent on beefing up M/W spending.

Proposed is the creation of a **railroad trust fund** through imposition of a 2% waybill tax (the money thus generated to be free of Federal taxes), with railroads contributing matching funds. One informed source within DOT estimates that this could produce an average of $500 million a year for roadway maintenance over what is presently being spent. It would have the effect of nearly doubling present expenditures. DOT's proposed railroad legislative package, now at the White House, endorses this concept; a similar program is favored by railroads; competing modes will not oppose it. Formulas would be written into the legislation to insure that expenditures would be on top of an average of prior outlays by any given road, though in one version of this proposal DOT would have authority to waive this requirement.

RATE REFORM

Widely discussed—and still the subject of debate last week within the Nixon Administration and in industry circles—are various proposals for rate reform, including the granting of greater **rate-making flexibility** through establishment of a "zone of reasonableness." In one version, the floor would be variable costs (avoidable costs, plus a share of allocated costs) and the ceiling would be 150% of that.

A proposal on rates which would not be opposed by any of the regulated modes would add the following to the Interstate Commerce Act:

"The Commission shall, on a continuing basis, investigate and identify traffics which are moving at rates below out-of-pocket cost as determined by the Commission, and cause such rates to be brought to just and reasonable levels. For the purpose of this sub-section, no rate which is below such out-of-pocket costs shall be deemed just and reasonable.

"The Commission shall, within 12 months of the passage of this act, promulgate and thereafter continually maintain standards and procedures for the establishment of rate levels adequate under honest, economical, and efficient management to cover operating and capital costs, including a fair and reasonable return.

"In promulgating such standards, operating costs shall include provision for replacement of useful equipment and facilities at current prices, and capital costs shall be based upon a prudent capital structure and shall include current costs of capital.

"The Commission shall also, within 6 months of the passage of this act, promulgate and thereafter continually maintain standards and procedures for the authorization of interim rate level adjustments pending any new determination of adequacy of rate levels, and such interim adjustments shall be approved by the Commission whenever and to the extent justified by experienced, or demonstrably certain, increases in cost."

The modes are also reported ready to support application of full regulation under the motor carrier section (Part II) of the Interstate Commerce Act to: Livestock, processed poultry, imported and cooked fish, re-dried tobacco, shelled peanuts, processed milk products and processed eggs (all now exempt from regulation). While the modes have agreed that transport of dry bulk commodities by domestic water carriers should remain exempt from regulation, they propose that such rates must be published with the ICC; and that the ICC should have the power to investigate and inquire into the practices and management of water carriers.

SPEEDIER ABANDONMENTS

Under one proposal a railroad seeking to abandon a line would no longer be required to obtain a certificate of public convenience and necessity. It would simply inform the ICC 45 days ahead of the planned abandonment. If the ICC ordered an investigation, it would be required to render a decision within six months.

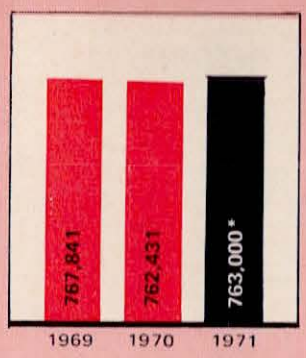
GRADE CROSSINGS

An intermodal proposal would preserve an existing provision of present Federal highway-aid statutes which permits individual states to spend up to 10% of matched funds for grade-crosing protection—but it would require the states to use at least 5% of their matched funds for grade-crossing protection.

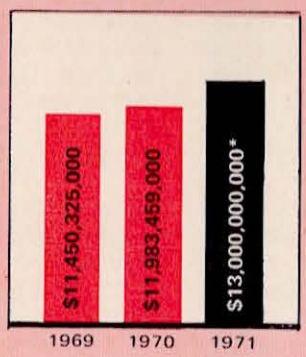
Railroads in 1971

A projection

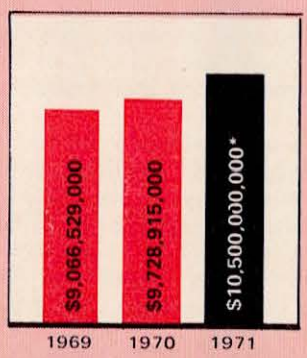
REVENUE TON-MILES *(billions)*



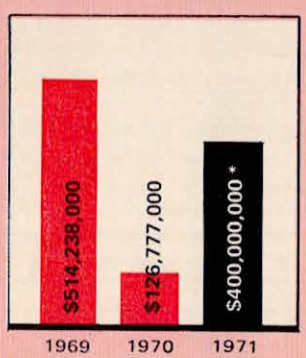
OPERATING REVENUES



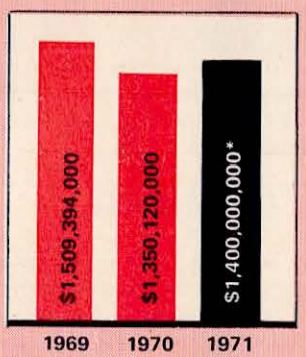
OPERATING EXPENSES



ORDINARY NET INCOME



CAPITAL SPENDING



**Estimates for 12 months 1971 are based on present trends and do not take into account legislative and regulatory reforms which could substantially brighten the picture.*

Central estimates that 40% of its main routes may need to be abandoned), and fiscal incentives to invest hundreds of millions of dollars more each year in new rolling stock, better maintenance and improved plant.

Such solutions are not new. Indeed, most of them have been lobbied about for years. What is new and profoundly exciting to railroad men is the fact that these changes in national transportation policy have a far better chance of being implemented than ever before in memory.

"We are going to get meaningful legislation, and I believe we are going to get it this year," Senator Smathers asserts. "The climate in Washington is favorable."

● **The reasons why.** Reasons for the changed climate in Washington—beyond the undoubted effect of the great information campaign railroads have waged—are complex. One is that Congress, having grudgingly passed a $125-million rail loan guarantee act (of which only $15.6 million remains) last year, is loathe to go that route again. Special loan guarantee bills (rails and aerospace this year, and who knows in years to come?) invariably pose headaches for lawmakers. Secondly, it is no secret that PC's still very shaky financial condition has helped to underscore the precarious situation of the whole industry. PC, according to its trustees, will have a cash deficit of $7.1 million in December and post a net loss of $240.8 million for 1971. Out of money, PC will somehow need an injection of at least $65 million to run through first quarter 1972. Congress, despite the nationalization studies, some labor fumings, and a few brave words from some lawmakers, would be extremely reluctant to resort to takeover. It would be the absolute last resort. And Congress appears to be aware that the troubles that have overtaken Penn Central could well overtake the entire industry unless they are headed off with a strong dose of preventive medicine.

Third, there is the factor of industry leadership cited by Assistant Secretary Baker. In his first six months in office, AAR President Ailes has presided over a fantastic degree of industry unity, without which nothing could have been accomplished. The unity extends intermodally to water and motor carriers. Water Transportation Association President John A. Creedy and American Trucking Associations President William A. Bresnahan, with Ailes, have exhibited statemanship for which there is no precedent in the transportation industry. Their unified stand on certain major questions—now embodied in legislation soon to be debated in Congress—clearly combines self-interest with common interest.

Fourth and most intangible is the whole question of national priorities. In retrospect, the decision by Congress not to fund the SST may have signaled Congress's desire to examine more closely the national transportation picture. Freight service cost U.S. business $87 billion last year. Of that outlay, $64 billion, or 74%, went to motor freight—local, nonregulated intercity, and regulated intercity (though rails' share is bigger when measured in ton-miles—something less than 40% of the total package). The motor carrier share is deceiving: it is generated in part by the growth in private and local haulage, and this growth is a dividend of highway and urban street congestion. Opposition to "paving the country" is growing; and a viable, non-polluting rail network is the logical alternative.

Finally, the economy remains sluggish. The Administration so far has held the line on measures to stimulate expansion. A Democratic Congress may decide to move ahead with its own anti-recession program. The 1972 Presidential election approaches. Here then is a volatile situation, in which Congress might take the lead.

Until the Federal fire engine arrives, however, railroads must go it alone. With ears cocked for the sirens, industry leaders interviewed by Railway Age in recent days agree on these economic projections for the full 12 months of 1971:

● **Traffic.** For the year to date, revenue ton-miles have been running 1% behind 1970, a decline attributable to the two-day strike by Signalmen, plus wildcat coal strikes. First-quarter 1971 ton-miles were just about level with first-quarter 1970; they were 2% behind in the second quarter. A modest pickup in traffic is predicted in the remainder of 1971, assuming the economy churns along at its present pace, and barring a lengthy steel strike. Thus, the traffic outlook for the full year is a level about the same as 1970's 762.4 billion ton-miles.

Carloadings were down about 3.5% in first-half 1971, reflecting a precipitous drop in coal and coke loadings. Again, a balancing pickup is anticipated in the remainder of the year. (The better showing of traffic measured in ton-miles over carloadings—a 1% drop vs a 3.5% decline—is explained by the trend toward heavier loadings and larger cars.)

● **Revenues and expenses.** Operating revenues, due to increased rates, will rise 8% over 1970, achieving record

(Continued on page 62)

ACROSS THE NATION, ASTRO National Coordinator Donald T. Martin and his "ASTROnauts" have carried the railroad message to millions in a grass-roots campaign.

IN WASHINGTON, RPI Chairman Henry Correa described rail needs before an audience of Congressional and Cabinet representatives at the National Press Club.

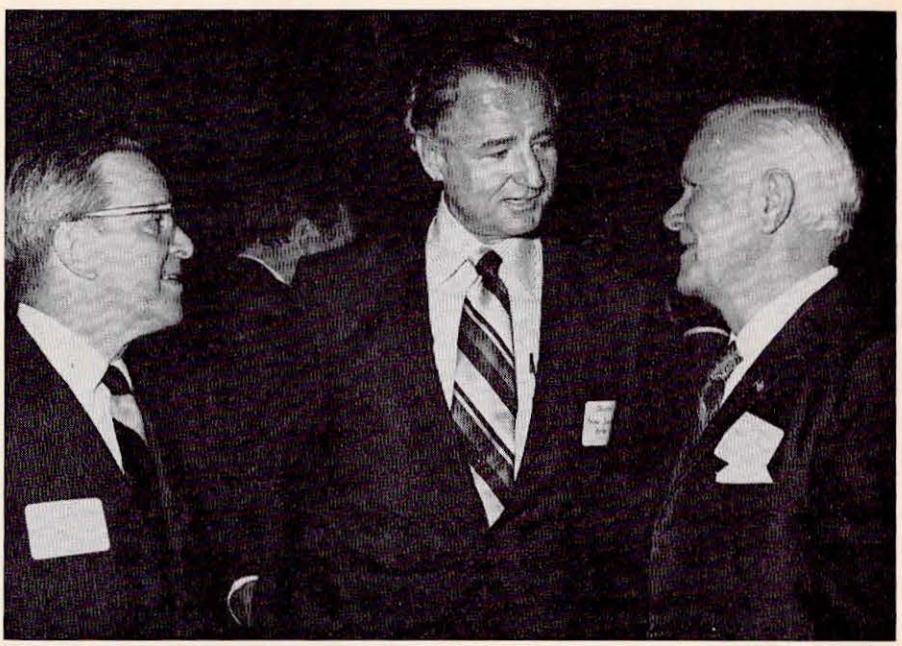
Winning friends from the grass roots to Congress

ASTRO's George Smathers says: "I'm getting eight or nine phone calls a day from Senators and Congressmen who say they're being flooded with letters about the railroad problem and who ask, 'What do you want us to do?'" This is the story behind those calls.

Into the ballroom of Washington's National Press Club on a recent warm Tuesday streamed the kind of VIP-filled audience to which the Press Club is well accustomed. But on this day the VIPs had come to hear not a visiting potentate, prime minister or ambassador plenipotentiary—but a railroad freight-car builder.

The speaker was Henry A. Correa, president of ACF Industries and also, as chairman of the Railway Progress Institute, spokesman for all rail suppliers. His subject was railroads—where they are going, how they are going to get there. His basic message:

"Economically healthy railroads are absolutely essential to everybody in this room, in this city, in this country. The nation cannot afford to let its railroad industry deteriorate to the point where the only recourse is nationalization."



HOUSE COMMERCE CHAIRMAN HARLEY STAGGERS (r), shown with RPI's Nils Lennartson and ASTRO's George Smathers, asked that RPI show be taken to Capitol Hill.

● **The message gets across.** When Correa's slide presentation, "Make Way for Progress," had ended, the applause was warm, the interest genuine. One guest, Rep. Harley O. Staggers (D.-W. Va.), chairman of the House Commerce Committee, subsequently asked RPI President Nils A. Lennartson if the presentation could be made before his full committee. (It will be.)

Penn Central President William H. Moore was one of a number of railroad men present to meet with the Congressional, White House and Cabinet representatives who turned out. At a later meeting of the AAR's board of directors, Moore urged that the RPI show be given the widest possible exposure. (Actually, it has already been presented between 300 and 400 times—"We've been too busy to keep count," says RPI's Bob Matthews—since RPI first put it together four years ago. The show now has a strong ASTRO flavor.)

One man not present at RPI's Press

AT THE WHITE HOUSE: President Nixon indicated his own interest in rail problems by inviting industry leaders to meet with him. Clockwise, from the President: SP's Benjamin Biaggini, Southern's Graham Claytor, Jr., BN's Louis Menk, Santa Fe's John Reed, AAR's Stephen Ailes, SCL's Thomas Rice, N&W's John Fishwick, C&O/B&O's Hays Watkins, Penn Central's Bill Moore, IC's William Johnson, UP's Frank Barnett, Peter Flanigan of White House staff, DOT Secretary John A. Volpe.

Club show was Donald T. Martin, Seaboard Coast Line's p.r. chief who is also heading up ASTRO's grass-roots campaign to spread the word about railroad problems and hoped-for solutions. Martin has been virtually commuting between his permanent office in Jacksonville, Fla., and his temporary ASTRO office at AAR headquarters in Washington for the past year. On the day of the RPI show he was in neither Jacksonville nor Washington, but in Chicago pitching ASTRO before a meeting of the Public Relations Society of America.

With the help of James A. Schultz, the AAR's public relations vice president, and Richard Briggs, ASTRO executive director—"and every railroad public relations man from coast to coast; they have done the real work"—Martin has put together an information campaign that has saturated the country.

"We've got everybody from freight agents to presidents out making speeches," says Martin.

Each week a status report on the grass-roots campaign is forwarded to Senator Smathers. In a typical recent week, this report listed 77 speeches made before 3,752 persons, 865 shipper contacts, 70 media contacts and 375 other contacts.

These efforts are augmented by the AAR's ASTRO-oriented radio, TV and newspaper advertising campaign.

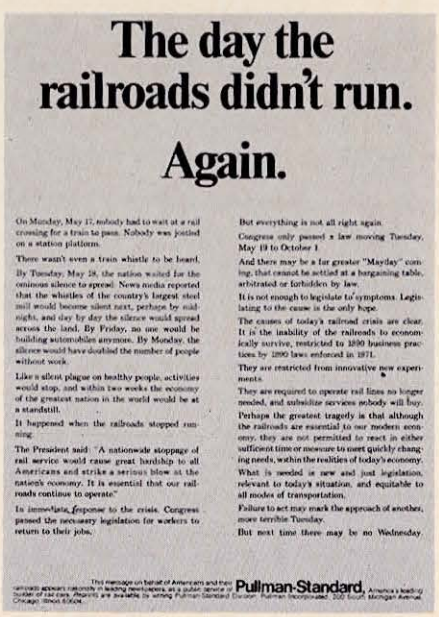
● **50 million, all told.** AAR's Schultz recently estimated that 50 million people have heard about the ASTRO program—through speeches, radio, television and printed materials. More than 160,000 have been reached directly through the grass-roots speaking campaign—and an additional 20,000 have heard the word from representatives of a national speakers' bureau.

More millions have been reached through ASTRO-related advertising programs such as that pioneered by Pullman Inc.

What kind of audiences does ASTRO seek out?

"We've spoken before PTA groups; we've spoken before national conventions. We don't want to miss anybody," says Martin.

Smathers is unstinting in his praise of the job done by the RPI, Martin, Schultz, Briggs "and thousands of others." Smathers himself speaks out frequently for ASTRO. In a recent speech at a meeting of business and civic leaders in Detroit, Smathers described why he believes it is important that railroads tell their story not only in Washington but also across the land.



The day the railroads didn't run.

Again.

On Monday, May 17, nobody had to wait at a rail crossing for a train to pass. Nobody was jostled on a station platform.

There wasn't even a train whistle to be heard.

By Tuesday, May 18, the nation waited for the ominous silence to spread. News media reported that the whistles of the country's largest steel mill would become silent next, perhaps by midnight, and day by day the silence would spread across the land. By Friday, no one would be building automobiles anymore. By Monday, the silence would have doubled the number of people without work.

Like a silent plague on healthy people, activities would stop, and within two weeks the economy of the greatest nation in the world would be at a standstill.

It happened when the railroads stopped running.

The President said: "A nationwide stoppage of rail service would cause great hardship to all Americans and strike a serious blow at the nation's economy. It is essential that our railroads continue to operate."

In immediate response to the crisis, Congress passed the necessary legislation for workers to return to their jobs.

But everything is not all right again.

Congress only passed a law moving Tuesday, May 19 to October 1.

And there may be a far greater "Mayday" coming, that cannot be settled at a bargaining table, arbitrated or forbidden by law.

It is not enough to legislate to symptoms. Legislating to the cause is the only hope.

The causes of today's railroad crisis are clear. It is the inability of the railroads to economically survive, restricted to 1890 business practices by 1890 laws enforced in 1971.

They are restricted from innovative new experiments.

They are required to operate rail lines no longer needed, and subsidize services nobody will buy.

Perhaps the greatest tragedy is that although the railroads are essential to our modern economy, they are not permitted to react in either sufficient time or measure to meet quickly changing needs, within the realities of today's economy. What is needed is new and just legislation, relevant to today's situation, and equitable to all modes of transportation.

Failure to act may mark the approach of another, more terrible Tuesday.

But next time there may be no Wednesday.

This message on behalf of Americans and their railroads appears concurrently in leading newspapers, as a public service of Pullman-Standard, America's leading builder of rail cars. Reports are available by writing Pullman Standard Division, Pullman Incorporated, 200 South Michigan Avenue, Chicago, Illinois 60604.

PULLMAN AD, one of series, points up essentially of railroads to the nation.

"Railroads must have your active support if they are to stave off nationalization," Smathers told the Detroiters. "They need you to tell your members of Congress that you are concerned; that you believe regulatory reform is a must; that you think railroads should be given the right to compete on an equal basis with other modes; that you think action has to be taken now—and that you believe the national interest demands no less."

● **The climate gets warmer.** Smathers believes the information campaign the railroads have waged—with the help of their suppliers and shippers—has been effective, especially in recent weeks.

"The people and the Congress are more receptive than ever before to doing something about the railroad problem," he said in a recent interview with Railway Age.

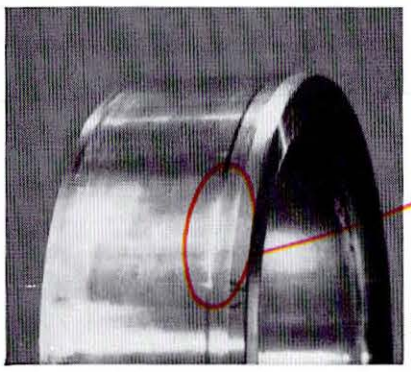
"People are beginning to write to their Congressmen. The letters, my friends in Congress tell me, are starting to come in large numbers. There is no question that we are getting a more favorable climate for meaningful legislation."

In his own speeches, Smathers keeps hammering away at one big point: "ASTRO must be pushed through by active and concerned citizens like you who know the facts and are willing to speak out."

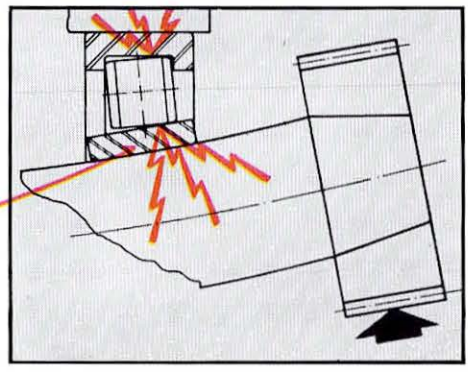
Smathers does not deny that the Penn Central crisis, by focusing public attention on the railroads, has had much to do with the heightened concern in Washington over the industry's fortunes. But he feels that it is the ASTRO program that has provided the nation with a positive picture of what railroads can be and thus has helped to warm the climate for change. ■

FAG

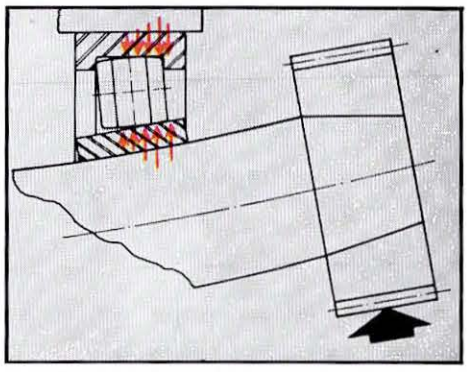
TRACTION MOTOR BEARINGS



EDGE LOADING TROUBLE TRACK



ORDINARY ROLLER (NOT FAG)



FAG COMPUTER-CONTOURED ROLLER

Even the heaviest hauls won't cause roller edge-loading failures in Norma FAG bearings.

Here's why:

You may have heard that a traction motor bearing has been introduced featuring an asymmetrically crowned inner ring to lick a problem we haven't had – roller edge loading during maximum tractive effort. This solution, however, sacrifices average fatigue life – an expensive trade-off.

Our unique crowned-roller design accommodates armature shaft deflection under the heaviest loads, reducing stress concentrations that cause premature fatigue failure.

The Norma FAG design has been proven through the years by many millions of miles of service.

Recently confirmed by computer studies based on the most severe duty cycles, the Norma FAG crowned roller design will safely accommodate the greater shaft deflections of the current production higher horsepower motors.

Why pay more, forfeit parts interchangeability and employ special assembly techniques which complicate maintenance? Switching to Norma FAG assures long service life by a proven bearing – a bearing made of tough, vacuum degassed forged steel rings, ground to tolerances comparable to an ultra-precision high-speed ball bearing. All functional bearing surfaces are given a super smooth finish, precise geometric form and rigid inspection to assure smoothest operation throughout the speed range.

Other features, such as closely controlled internal clearances and extra rugged, full-contact or drop-roller machined brass retainers contribute to more trouble-free mileage.

Write for Engineering News Letter No. 22 for more complete information, or call one of our Norma FAG Traction Bearing Engineering Specialists, (203) 348-3731.

NORMA **FAG** BEARINGS CORPORATION

STAMFORD, CONNECTICUT 06904

Center plates pass

grinding 17-month test.

No major wear spots or galling showed up on plate maintained with Shell Center Plate Lubricant (see right). Railroads are saving thousands of man-hours and dollars with this unique product.

When the center plate on the right was photographed, it had just completed 17 months on the job for a major road. It was cleaned with an air blower; swabbed with solvent. Look at it! Smooth. No galling. Only minor evidence of wear.

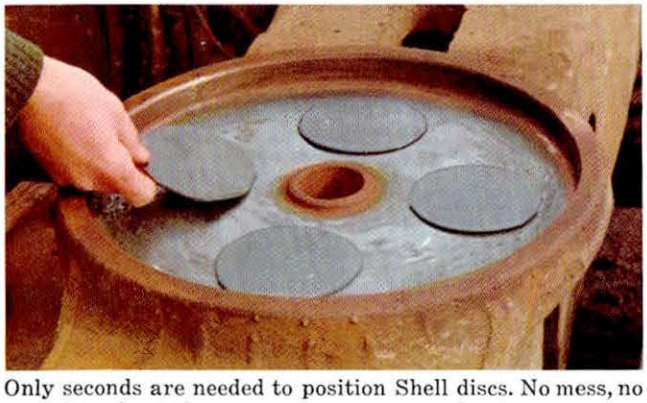
After 17 months of horseshoe bends and S curves; after 68 weeks of rocking and swiveling under loads up to 110 tons, this is really something! Yet, it's typical. We spot-checked the plates of many of the thousands of cars maintained with Shell Center Plate Lubricant and the story was basically the same—effective, long-run lubrication.

Material Savings—Improved Operations

Effective, reliable lubrication is only one of the reasons why so many roads are switching to this Shell product. Material costs are significantly lower because you don't use as much of the Shell lubricant as you do grease or loose pellets. But the greatest saving is keeping expensive, revenue-producing equipment operational. Think about that.

When a center plate is balky, the wheel flanges tend to climb the rail when rounding a curve. In extreme cases, this can cause derailing. Shell Center Plate Lubricant helps protect against this hazard and keep trucks moving freely. This, in turn, reduces wear on the wheel flanges and rail sides. Result: wheels and rails last longer.

You really ought to think about these discs for center plate lubrication. They're clean. Easy to apply, even in freezing weather. Car men are sure to use them because they're so much simpler to apply and accurate to measure than grease or loose pellets. One man can service 20 to 30 cars from a single pail of Shell discs. The cumulative savings in time and manpower could be important for you.



Only seconds are needed to position Shell discs. No mess, no guessing about the proper amount to apply. One man carrying a 15-lb. pail of about 240 Shell discs can lubricate 20-30 cars quickly.

◀ Keeping expensive, revenue-producing equipment operational is a major reason why more center plates are being lubricated with unique Shell Center Plate discs. They help keep trucks moving freely, help reduce wear on wheel flanges and rail sides.

After 17 months' service, there are no major wear spots or galling on this 100 ton coal car center plate lubricated with Shell Center Plate Lubricant. Note how the dark gray component of the lubricant has made a tightly-adhering coating on the metal. Note also how clean the flange has remained for 17 months.

Partner in Savings—Shell TORNUS® Oil

TORNUS Oil is another Shell product that is helping keep maintenance costs low on the EMD and GE locomotives of many roads today. This high-performance oil keeps soot and carbon particles in suspension, keeps engines clean and working efficiently. TORNUS was employed over 660 million miles ago by 18 leading roads, and has helped over 2,000 EMD diesels run smoothly.

Your Shell Representative is the man to see.

He can tell you about Shell Center Plate Lubricant and TORNUS Oil in detail—how they are used, how they can help cut costs for you. Call him today. Stamford, Ct., (203) 327-3600; Baltimore, Md., (301) 821-5905; Chicago, Ill., (312) 341-3275; New Orleans, La., (504) 288-7511; Menlo Park, Calif., (415) 325-0721. Shell Commercial Marketing, One Shell Plaza, Houston, Texas 77002.

Shell Tornus® Oil
Shell Center Plate Lubricant

SHELL

General Electric announces

a three step, action plan to help us help you cut your maintenance costs

We call it ACTION 71. And it's intended to help us move faster when you need us. To help us respond with the right parts when you need them . . . with whatever it takes to keep you rolling.

1. An automated plant for immediate availability of remanufactured diesel engines. Eighty-three rebuild specialists, new automated equipment, and a modern computerized test system. Our new facility specializes in rebuilding and repairing engines and components. So the engines you need for unit exchange will be there waiting for you.

2. A GE Customer Service Specialist to give personalized response to your parts needs. General Electric's five Regional Parts Centers are assigning a Customer Service Specialist to each customer. When you need parts, you talk to a single GE Specialist no matter what your needs.

He listens to you, processes your order, and provides immediate and continuous feedback of order status. And, we've increased the number of items stocked in regional inventories to give you the fastest possible parts delivery.

3. A new computerized central warehouse to back up your Regional Parts Center. We've increased our warehouse capacity by 75% to provide immediate shipment of over 20,000 different parts. And, we've computerized the order processing procedure and installed an automated stacker crane to cut your downtime to the bone.

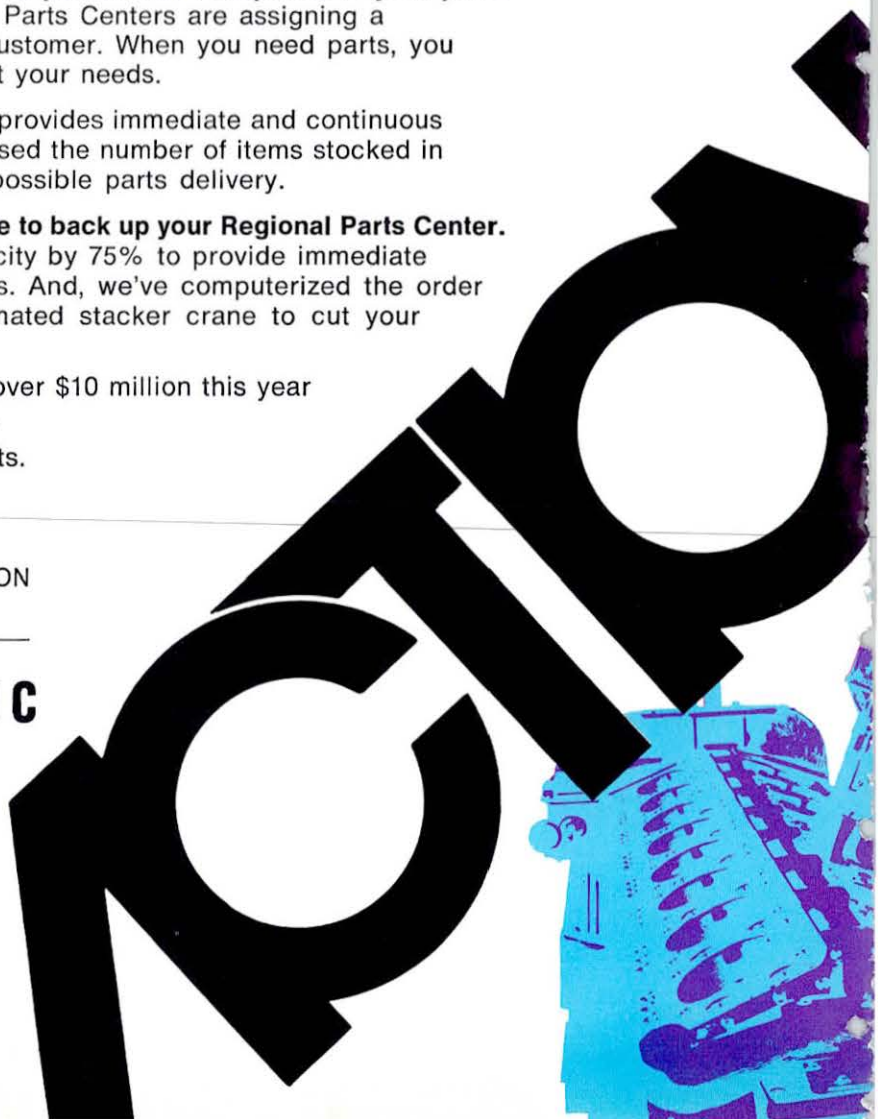
ACTION 71 . . . General Electric is spending over $10 million this year to give you the fastest possible parts service.

ACTION 71 . . . to cut your maintenance costs.

121-53

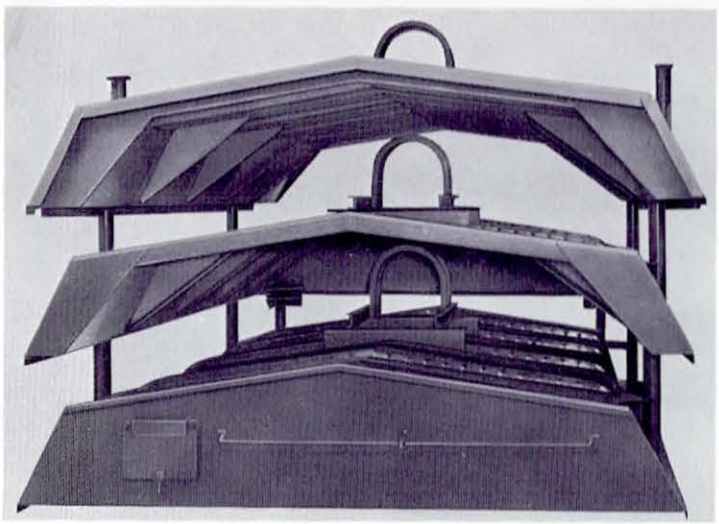
GENERAL ELECTRIC COMPANY
TRANSPORTATION SYSTEMS BUSINESS DIVISION
ERIE, PENNSYLVANIA 16501

GENERAL ELECTRIC

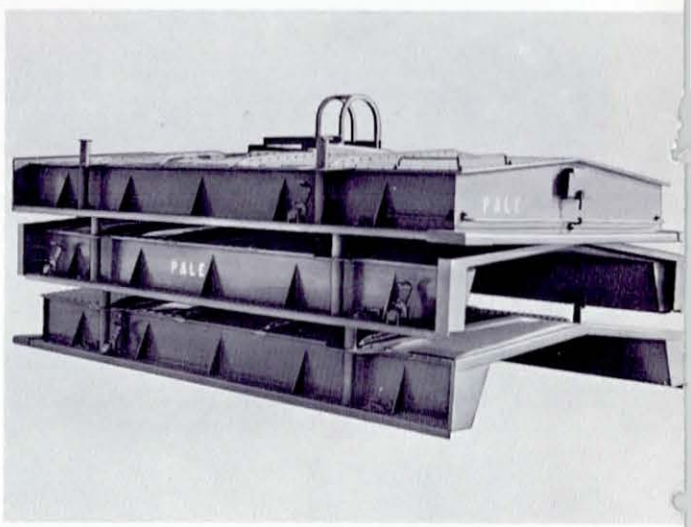


What's Stanray done for railroads lately?

Removable roofs...

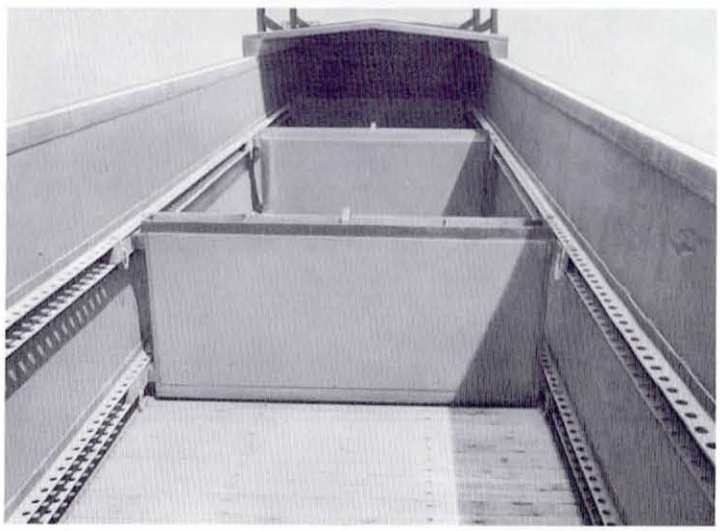


Tri-section roof provides up to 9 feet of loading space. Is available with top inspection hatch and running board, or with end-mounted hatch and no running board.



Low-profile 3-section removable roof is reinforced for extra strength. Has stacking stanchions and end-mounted inspection hatch.

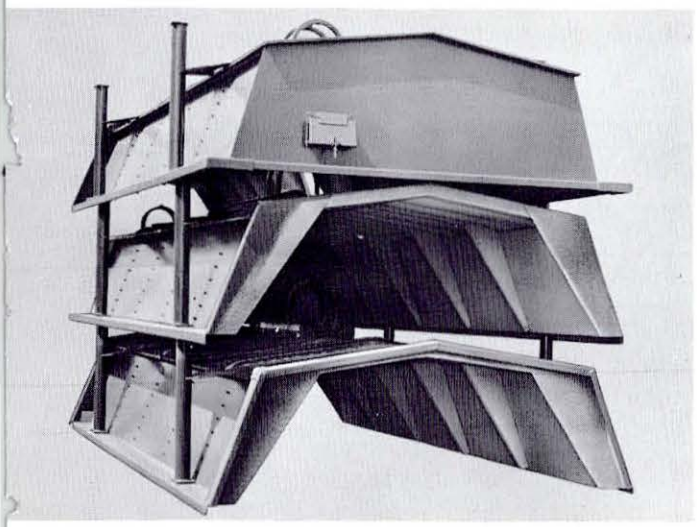
Bulkheads...



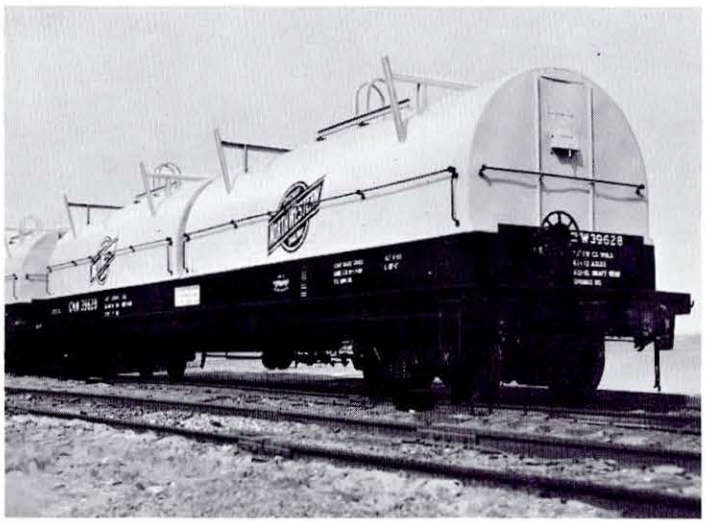
High strength bulkheads using 9 inch channel framework and 3/16 or 1/4 inch steel facing sheets. Can be used with or without wood facing—Furnished with manual or automatic locking devices and special belt rails.

Ends and sides

The corrugations of Standard Dreadnaught Ends and Sides provide the greatest resistance to shock and impact—add strength where it's needed most.



This 3-section removable roof provides a gondola with 75 percent of the capacity of a boxcar. Is specially reinforced, stacks easily, and comes with top or end-mounted inspection hatches.



Twin-section coil cover can be easily stacked for loading or unloading. Has end-mounted inspection hatch.

STANDARD RAILWAY EQUIPMENT
division of STANRAY CORPORATION
Chicago, Illinois • Hammond, Indiana

OUR NEW MUX.

Performance is up. Size is down. Installation is simple. Price is lower.

All things considered, we think our new 46A3 "L" compatible channel bank is the best FDM channel bank on the market today.

Consider price. It's been reduced dramatically. We've lowered manufacturing costs by using advanced techniques like hybrid thick film circuitry and our unique polylithic crystal filters. And we pass the savings on to you, whether you need 12 channels, 60 channels or 1260 channels. Standard deliveries are available now.

Now consider improvements.

First, the basic 60-channel assembly, like the one shown above, is less than one-third the size of its predecessor. In fact, the basic assembly (including channel carrier supply, fuse and filter panel and summary alarm panel) takes up only 15 mounting spaces on a standard 19″ rack. The common equipment in the basic assembly is all you need to expand up to 240 channels on an 8′ rack or 360 channels on a 10′ 6″ rack. Each 60-channel add-on package only takes up 10 mounting spaces since it uses the common equipment in the basic package.

Second, there's simplified installation. Each basic 60-channel assembly and channel add-on package is prewired. To install the basic assembly, just tie the drops down and hook up to your existing equipment. When it's time to add channels, simply repeat the process with the add-on package and use the cable stub we supply to tie into the basic 60-channel assembly.

Third, there's improved performance. The figures include an improved VF return loss figure of 26 dB, a reduced typical carrier leak of −38 dB, and a wider frequency response of 250-3450 Hz. The 46A3 channel bank exceeds CCITT recommendations and, of course, is compatible with our own 46A and W.E. "L" muliplex systems.

We know it all sounds too good to be true, so we're ready for your questions. Just phone us: Atlanta (404) 261-8282 / Chicago (312) 263-1321 / Dallas (214) 363-0286 / Falls Church (703) 533-3344 / San Carlos (415) 591-8461. Or write GTE Lenkurt Incorporated, Dept. C720, 1105 County Road, San Carlos, California 94070.

GTE LENKURT

MOVING PEOPLE

Six firms submit proposals for D. C. Metro Cars

Unpriced technical proposals for 300 Metro cars have been submitted to the Washington Metropolitan Area Transit Authority by Pullman-Standard, St. Louis Car, General Electric, Rohr, Ling Temco Vought, and Toshiba (Japan). After these proposals are evaluated, priced bids will be sought. These will be opened in November, with contract award scheduled for December. Eventually, 550 cars will be ordered, at a total cost now estimated at $155 million. Among those companies which studied the initial specifications but did not enter a formal proposal: Boeing, United Aircraft, Hawker Siddeley Canada.

More commuter trains for Washington, D. C.?

The Department of Transportation has released the results of a study by Consultant Carl H. Englund, Jr., showing that commuter service into Washington on existing tracks of the Baltimore & Ohio, Penn Central and Richmond, Fredericksburg & Potomac would attract more than 13,000 riders. But the resulting revenues, says DOT, would fall short by more than $300,000 of meeting operating deficits —and local money would have to be raised to cover one-third of the start-up costs for the new service, estimated at $10-to-$15 million (for new equipment and facilities). Englund recommended that: (1) B&O concentrate on providing weekday commuter service between Gaithersburg and Washington, 21 miles, instead of on present Brunswick-Washington runs; (2) RF&P handle a 35-mile Quantico, Va.-Washington route; (3) Penn Central expand its 40-mile Baltimore-Washington commuter runs to serve southwest Washington, allowing B&O to drop current commuter service between the cities.

Senator wants new trains for Amtrak

Sen. Lowell P. Weicker, Jr. (R.-Conn.), has introduced a bill that would pay Amtrak $90 million specifically for purchase of high-speed trains utilizing present roadbeds. Based on current prices, the $90 million could purchase 30 240-passenger trains, said Sen. Weicker. He said the equipment could produce revenues of $79 million annually for Amtrak and prevent "endless operating subsidies for passenger service—a fate to which the corporation is now predestined."

Speakers lined up for Pittsburgh parley

Dr. Hideo Shima, who as chief engineer of Japanese National Railways designed the New Tokaido Line (and who now heads Japan's National Space Development Agency), will be a headline speaker at the Fifth International Conference on Urban Transportation in Pittsburgh Sept. 8-10. Pierre Weil, director of the Paris Metro, who has spoken at previous Pittsburgh conferences, will return this year.

DOT grants:

To the Denver Regional Transportation District, $382,000 toward a $963,000 joint planning program involving RTD, the Colorado Division of Highways, and the Denver Regional Council of Governments. The program will produce, among other things, a comprehensive mass transit plan for the greater Denver region to be submitted to voters in 1974 . . . To the Cleveland Transit System, $1,274,200 for the first revenue-service test of an alternating-current propulsion system for rapid transit. A CTS contribution of $526,171 will bring the total project cost to $1.8 million. WABCO will supply the solid state control systems which will take a 600-volt direct current from a catenary line or third rail and convert it through on-board "inverters" to variable frequency alternating current. The alternating current will drive A/C traction motors on the three transit cars.

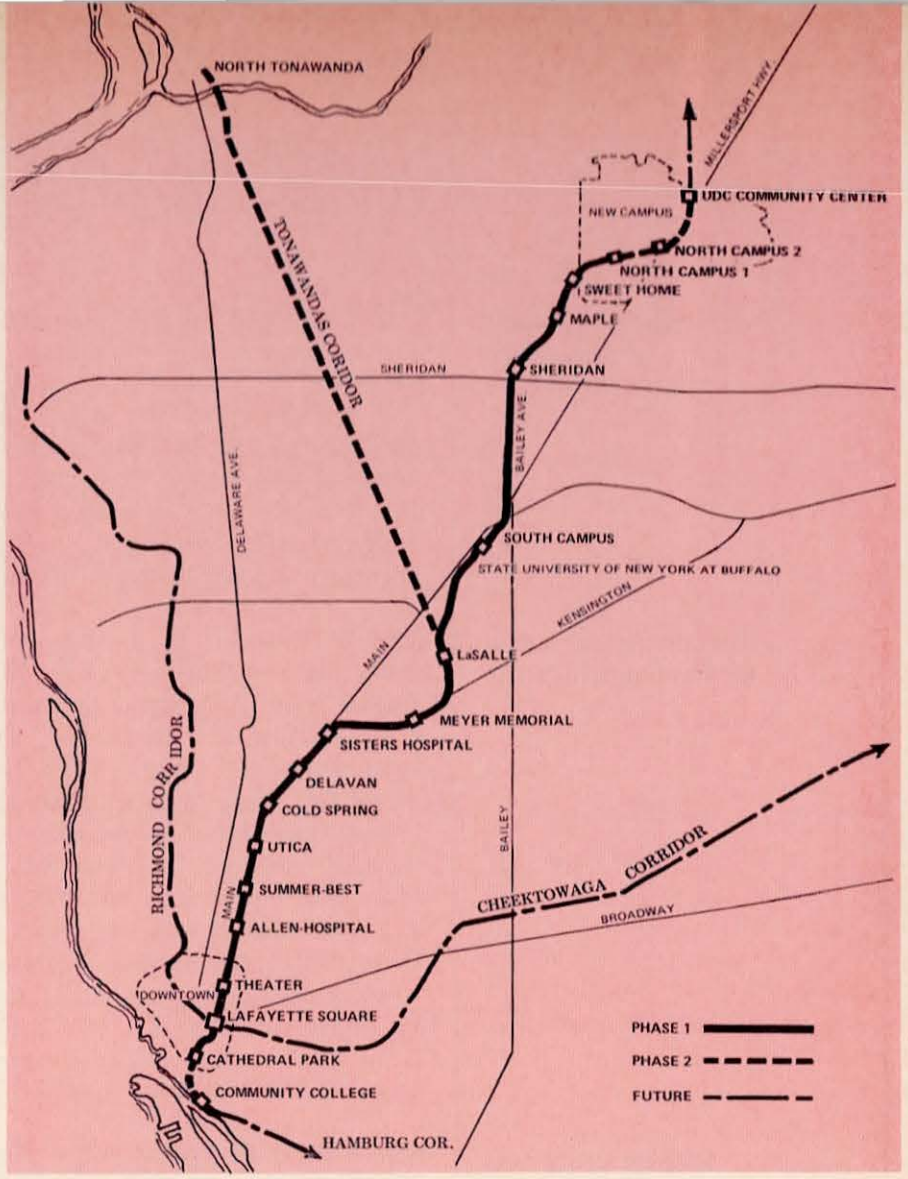
Buffalo puts transit on the map —rapidly

Most cities spend years "studying" rapid transit—then more years in a baffling, and often fruitless, quest for funds to implement the studies. The city of Buffalo, N.Y., has been a startling exception. A dark horse in the transit sweepstakes, Buffalo has moved quietly and swiftly into the home stretch and now promises to be the next U.S. city, after San Francisco and Washington, with an operational rail transit system.

Buffalo's Mass Transit Study did not get under way until February 1970, scarcely 15 months ago. In March of this year, the consultants completed their work. In the early hours of Sunday, June 6, the State Senate, by a vote of 55-0, approved legislation giving the Niagara Frontier Transportation Authority the power (and, more to the point, a state grant of $86 million) to build a 12.5-mile rail rapid transit line within the city of Buffalo and suburban Amherst. A few hours earlier the House had approved the bill, 149-1. The Buffalo Courier-Express jubilantly contrasted the swift passage of the Buffalo bill with the fact that "the lower house debated for 90 minutes a proposal to install one new subway station in Queens."

The authorized $86 million is expected to come from a $2.5-billion transportation bond issue which the legislature approved this Spring and which will go before New York State voters in November. Total cost of the project will be in excess of $250 million, of which about $25 million will go for rolling stock; the Federal government, under the Urban Mass Transportation Assistance Act of 1970, is empowered to contribute more than $170 million.

● **Two-part study.** Buffalo's Mass Transit Study was actually a two-pronged probe into the city's transportation needs. First, short-range needs had to be considered. The consulting firm of W. C. Gilman & Co. evolved a program calling for an immediate start on development of a unified bus transit network to be completed by 1975.



CONSTRUCTION of Phase I Buffalo-Amherst line will begin by 1973.

Long-range needs were studied by TEI Consulting Engineers and Wilbur Smith & Associates. They recommended the rail transit program, beginning with a line cutting through the Buffalo/Amherst corridor. This line will extend from a terminal of the former Delaware, Lackawanna & Western alongside the Buffalo River to a terminal at the Community Center of the planned "new community" to be developed in Amherst by the New York State Urban Development Corp. Of the total 12.5 miles, 3.9 miles will be in subway, 7.3 miles on aerial structure, and 1.3 miles at grade or in open cut.

The line will be built to permit later expansion into a full regional network. The southern terminal at the Community College will be laid out so that the line can be extended southeast and south to Hamburg. The northern terminal will allow extension to the north. Provision is made for a junction just north of the LaSalle station so that a branch line can be continued on the railroad right-of-way to the Tonawandas. The layout of the Lafayette Square station provides for a future east-west subway that would form the nucleus of a line through the West Side to the Tonawanda industrial district, and a line through the East Side to and beyond the Greater Buffalo International Airport. A network of feeder bus lines will be linked to the rapid transit line at most of the stations.

● **Operational in 1975.** For financing, design and construction, the consultants have divided the Buffalo/Amherst project into two phases. Phase 1 covers the section between Cathedral Park Station and North Campus 1 Station. Phase 2 extends the line south to Community College Station and north to the UDC Community Center Station.

Under the consultants' proposed timetable, final engineering and land acquisitions for Phase 1 would be carried out throughout 1972 and 1973; construction would begin on different segments of the line between 1973 and mid-1974. Earliest construction would be completed late in 1975.

Phase 2 would be designed during late 1975 and all of 1976, constructed during 1977 and 1978, and opened in January 1979. ■

Baltimore: "We'll start to dig in '73"

On July 1, Baltimore's Metropolitan Transit Authority was absorbed into the Maryland Department of Transportation. MTA General Manager Walter J. Addison became administrator of the Maryland Mass Transit Administration, responsible for implementation of a rapid transit system in the Baltimore region. A few days previously, the old MTA approved the filing of an application to the Urban Mass Transportation Administration for a $437-million capital grant for construction of a 28-mile, $656-million rapid transit network, Phase I of an eventual 65-mile system. Railway Age talked with Administrator Addison on the changeover and future plans.

Like New York, Maryland has decided to fund transit at the state, not the local, level. The result is "action now," while other cities still fuss and fume over financing.

Q. When will Baltimore start digging?

A. As it appears right now, actual earth-moving type of construction will probably begin some time in 1973.

Q. Is there a real need for rapid transit in Baltimore?

A. I think that's very obvious if one gets a chance to look around and observe Baltimore's traffic problems and mobility problems. We don't have a very extensive expressway system here. The future of expressways in Baltimore is subject to a great deal of controversy and question. It's a large metropolitan area in the major U.S. corridor of transportation, running out of space with regard to roads and streets.

Q. Your Phase I funding relies on a one-third grant of $219 million from the State of Maryland. What is now the mechanism for this state funding?

A. As of July 1, as you know, we became part of the Maryland DOT. This is a unique arrangement with regard to both organization and financing in the U.S., because in this new state DOT all sources of revenues from all modes of transportation will be pooled into one consolidated transportation fund. There's no such thing as sacrosanct highway, port, or transit funds. With respect to providing funds for capital improvements, it would appear that this consolidated fund will be the machinery by which this money is made available by the state. Whether it can be available within the present revenue structure, or whether there have to be some changes in taxing, it's difficult to say; but whatever the results are, the funding for transit will be part of a consolidated program developed by the state.

Q. What were the decision-making factors that enabled Baltimore to settle on rapid transit—the technology of steel wheel on steel rail?

A. Probably the one most important factor that was made in our decision was the reliability in the hard background experience with regard to anticipated maintenance and operating costs. There are a lot of very interesting potentialities in the rubber-tired system. But in the clear, hard, cold light of responsibility, it would appear that the other factors were potentials only. There was no background experience to indicate that they would be what they were proposed to be. However, there's not much in the way of unexplored factors with regard to a steel wheel, steel rail system. Time being a pressing factor in the implementation of this system, we felt that the only reasonable thing to do at this point in time and state of technology was to advance the current technology, rather than establish something very new that might prove to be disastrous. We didn't want to take the chance.

Q. How did you corral local and state support for your transit plan?

A. The thing that worked in our favor was that generally those persons in responsible positions in urban areas were not unaware of the problems of transportation and are in acceptance of the need for improved transit. The thing that gives people a lot of trouble is the means to support transit financially. I guess the thing that kept us from getting hung up is that this new state DOT and its unique financing allowed us to proceed with acceptance of the fact that transit was a good idea, rapid transit was a better idea, and that financing would best be done from the state level rather than going to a finite jurisdiction and asking them to make some special provision.

Q. How many cars are involved in Phase I?

A. I don't have a firm number. I think I'd take a lesson from places like New York or Boston which after 70 years are still making extensions and improvements to their system. The actual number of cars depends on various things—for one we haven't developed our specifications.

Q. What could the Federal government be doing that it isn't now doing?

A. The Federal government has indicated the best of intentions, so far as its programs are concerned. If I were critical, I would have to say that the execution of the intentions falls far short of the intentions. This has to do with planning goals and things that become bureaucratic red tape in order to get something done that a program is established to accomplish. I don't mean to diminish the need for long-range plans or short-range plans but it seems to me that the bureaucratic impediment seems to be overweighing program intentions. The programs will fall short unless something is done to streamline them. ■

"Good e
isn't good

Good enough is a compromise. It's buying something you know could be better in return for a lower price.

Which is nothing short of paying full price for mediocrity. And that's no bargain at all. The real measure of a bargain is performance.

That's why we make Timken® "AP" bearings as good as we know how, then charge what has to be charged.

Sure, we could make our bearings of through-hardened steel and soften the price.

But that isn't good enough.

So we make our bearings of case-carburized steel. Hard on the outside,

nough"
l enough.

tough on the inside.

So tough, Timken "AP" bearings have rolled up literally billions of dependable miles on all types of freight cars since 1954.

That's better than any other bearing. But we still don't think it's good enough.

The Timken Company, Canton, O. 44706.

Worth more in the long run.

TIMKEN®

REGISTERED TRADEMARK

TAPERED ROLLER BEARINGS

Circle 15 on coupon page 43

Here's how I'd run

The Trainman

I always hear them talking about higher costs...for power. Replacement parts. Paint jobs. Labor...what have you.

I don't know much about that end of it. But I do say why in the name of common sense don't they *do* something about it? Like changing over to those new lighter-weight stainless steel cars.

I read where the Long Island Rail Road switched to nickel stainless steel cars. And figured they'd save $2.7 million on *power* over the life of their cars—because they're lighter.

And my buddy who works for MTA said they had 600 new stainless steel subway cars. And since they expect the cars to last 35 years, they figure they'll save $5.6 million on power. Plus an additional $800 on each car on maintenance and paint.

I tell you if I were running this railroad...

...hm-m-m, maybe I *should* be running this railroad.

this railroad...

The Commuting Secretary

I'd throw away all the dirty old cars. And get pretty new ones. Like those stainless steel cars on the Philadelphia-Lindenwold Line.

I use that train five days a week and let me tell you something, it's terrific.

I live in Lindenwold and work in Philadelphia. Driving in used to be a 45-minute bore. A real headache.

Now the same trip takes only *22 minutes* by train. And I should add it's a real pleasure. Thousands of other commuters apparently feel the same way I do and have started taking the train every day instead of driving in.

Those beautiful stainless steel trains are so clean and comfortable. And besides, they're automated! I wonder when the rest of the country will catch up with Philadelphia.

...If only *I* ran this railroad.

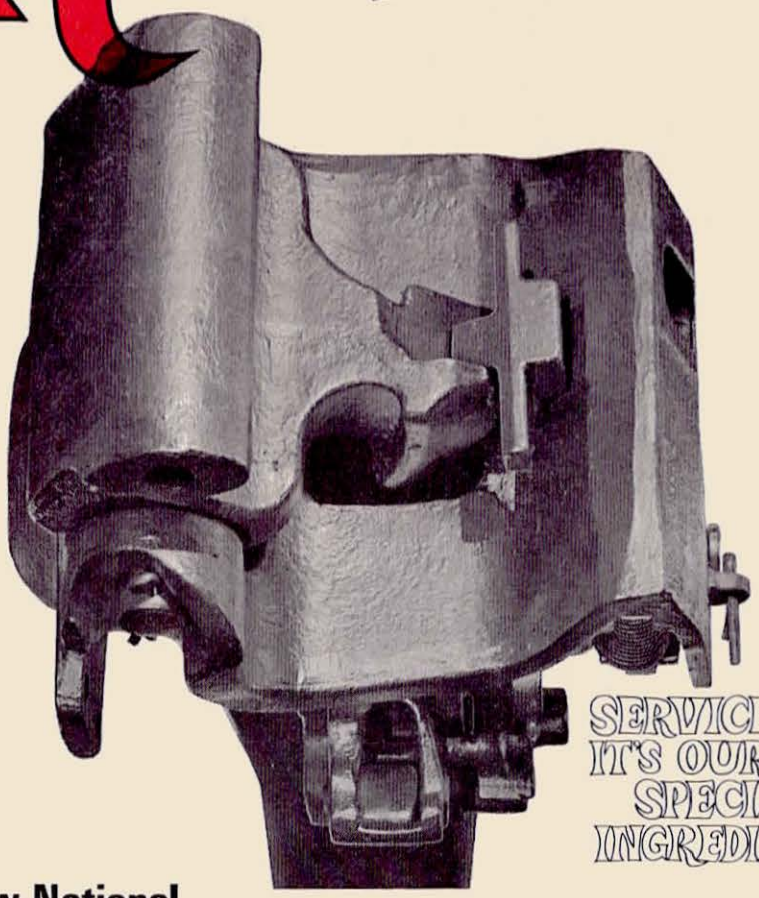
INTERNATIONAL NICKEL

For a copy of our brochure—"Nickel Stainless Steel—The Modern Material for Modern Transit"—write to Section RA771, The International Nickel Company, Inc., One New York Plaza, New York, N.Y. 10004. In Canada, The International Nickel Company of Canada, Ltd., P.O. Box 44, Toronto-Dominion Centre, Toronto 111, Ontario.

Circle 16 on coupon page 43

HERE'S A REAL

GRABBER



SERVICE... IT'S OUR OWN SPECIAL INGREDIENT

It's the fabulous new National Compatimatic Coupler...the only compatible automatic coupler in existence.

Here's What Compatimatic Does. Utilizing standard components and additional mechanical parts, Compatimatic is ready to couple at all times . . . couples with any standard AAR coupler without any idler or transition device. Compatimatic fits any existing coupler shank or any car without alterations . . . gives 4 inch lateral gathering during coupling . . . eliminates closed-knuckle miscoupling . . . won't react to vibration or shock.

Here's Why Compatimatic Is Safer. Less need for yardmen to go between cars. No need to help ease open the knuckle by hand. No need to connect airlines manually if optional automatic trainline connector is used.

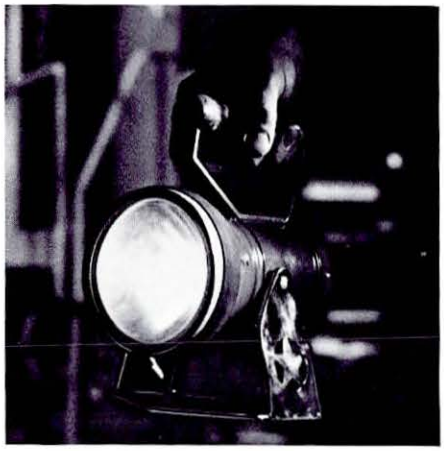
Here's How Compatimatic Works. Comprised primarily of AAR standard components, Compatimatic has coupler body design modified to accommodate additional parts. Compatimatic has unique plunger in guard arm side of contour. Forced rearward by knuckle of opposing coupler, this plunger disengages automatic feature, thus permitting coupler parts to operate normally. When not coupled, plunger moves forward and automatic feature is activated.

If these exclusive coupler features still don't grab you, then consider this also: You now get "instant" coupler service on all coupler types from all National sales offices. They give you immediate, **same day availabilities . . . arrange for rapid shipment from stock with specified delivery date.** Why fight it any longer? Just grab the phone and swing us into action.

NC **NATIONAL CASTINGS DIVISION**
Midland-Ross Corporation MR
SOUTH DOCK STREET • SHARON, PENNSYLVANIA 16146

Circle 17 on coupon page 43

New Products Report



Railroad lantern (RA-1)

The Starlite 600 Model lantern, weighing less than 3½ lb with batteries, is activated by turning the lens housing. Should the lamp in use burn out, the lantern housing need only be turned again to instantly activate a built-in spare light bulb. The lens is made from Uvex plastic sheet supplied by Eastman and is frosted to reduce glare. The sheet is said to have good impact resistance and the ability to withstand extreme weather conditions. The lantern also features an extra wide light beam; a movable base permitting easy placement and aiming of the lantern; and an oversized handle for easy holding. *Star Headlight & Lantern, Inc.*

Striping powder (RA-2)

For marking aisles, platforms, and danger zones, the durability of Cat-A-Quick's clear, sharp lines of continuous regulation thickness is said to equal any good quality traffic paint. The flame-applied, instant-dry striping powder requires no mixing, thinning, or preheating; it is poured directly from the package into the striping machine. The striper, equipped with propane flame, melts the powder just above the surface, bonding it tack-free to pavement in 10 sec. Glass beads blended evenly throughout pigmented resin granules make the lines immediately reflective.

The powder is available in white and federal yellow in 25-lb boxes. The striping machine adapts to lay down 4-, 6- and 12-in. lines. Because there is nothing to clog equipment, lengthy clean-up time is eliminated, cutting over-all costs to approximately seven cents per running foot. *Cataphote Corp.*

Pollution control (RA-3)

Enprox 555 is the latest addition to the manufacturer's expanding line of specialized water treatment and pollution control products. It is phosphate and chromate free. The liquid organic water treatment material inhibits corrosion, scale and sludge buildup in industrial water systems without creating a disposal problem. The material inhibits formation of calcium, magnesium and barium scale deposits in water. The manufacturer says it has wide use in cooling water recirculating systems such as heat exchangers and cooling jackets. It is also successful in humidifiers and evaporators. *Oakite Products.*

Software information (RA-4)

Software Reports is a multi-volume current-awareness service that provides information on commercially available proprietary software. Business, scientific and engineering systems software, operations research and management sciences will be covered in applications grouped for easy reference and comparisons. The heart of the service will be the package reports that contain pricing, operational characteristics, hardware requirements and support and training facilities for significant packages currently being marketed.

Minicomputer Reports is a three-volume looseleaf reference set containing complete and comprehensive coverage of the most significant minicomputers on the market. System reports describe minicomputer characteristics necessary to "mix and match" them to the user's needs. Conveniently charted

FOR FAST INFORMATION ON 1 to 3 ITEMS ONLY USE THIS

EXPRESS CHECK-OUT CARD

PLACE NUMBER OF ITEM IN CIRCLE

◯ ◯ ◯

AND AIRMAIL DIRECT TO PUBLISHER TODAY

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ 7/12/71

350 Broadway, N.Y., N.Y. 10013 READERS' SERVICE (Att. J. Meyer)

PLEASE SEND ADDITIONAL INFORMATION ABOUT PRODUCTS IN ADVERTISEMENTS NUMBERED: 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44

PLEASE SEND INFORMATION ABOUT PRODUCTS MARKED: RA-1 RA-2 RA-3 RA-4 RA-5 RA-6 NL-1 NL-2 NL-3 NL-4 NL-5 NL-6 NL-7

LIMIT: FIVE NUMBERS

NAME _____ TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

Inquiries can be processed only if title and company are shown. 7/12/71

information includes summary of hardware, software and I/O equipment; system configuration; internal storage elements; central processor facilities and features; price data. *Auerbach Info, Inc.*

Alarm system (RA-5)

A new, highly secure and accurate alarm reporting system for monitoring unattended field communications stations from a central location is the 51F alarm system. The 51F master station or central office terminal automatically and continuously interrogates a number of remote stations which respond sequentially to indicate normal or off-normal conditions. Reporting time is seven to eight seconds.

Capacity of the 51F is 64 alarms on a single tone frequency, which may be assigned to one remote station or distributed among as many as 64 remote stations. Tone frequencies may share the same facility with telegraph data, order wire and speech-plus channels. As many as eight master terminals, each having 64 reporting functions, can be accommodated on an 8-kHz microwave supervisory circuit along with voice communications. *Lenkurt Electric Co., Inc.*

Data transmission system (RA-6)

The ADS-630 accepts low-speed digital information and transmits this data at high speeds over a commercial voice-grade telephone line in either half-mode or full-duplex mode without modification. The ADS-630 accepts up to two high-speed voice-grade lines at the central computer and up to three at any remote sites.

The ADS-630 data distribution system accepts digital data over the full spectrum of low-speed baud rates (normally 75 to 600 baud) and allows simultaneous intermixing of any two. The number of low-speed channels (up to 18) accommodated by this new multiplexer varies with the data rate of the low-speed terminal devices. Low-speed digital data from all terminals is accumulated and transmitted as interleaved bits through any high-speed synchronous modem at rates ranging from 2,000 to 9,600 bits per second.

A continuous, automatic display of color-coded lights on the ADS-630's front panel provides constant monitoring of internal data, terminal, and telephone line conditions. Critical functions are backed up with audible alarms. Provision is made for manual control checks. *American Data Systems.*

NEW LITERATURE

POWER FAILURES. A 20-page book about automated emergency systems for handling power failures is available from Automatic Switch Co. The book tells, among other things, why the need for emergency power has grown, why it will become more essential as demand for electricity increases and why it must be operated automatically. Typical installation diagrams are included. (NL-1)

RADIO DATA. A new railroad data book provides a meaningful, simple-to-use compilation of radio systems information on the more than 8,350 active stations authorized by the FCC in railroad radio service. Priced at $40, it is available from Arcata Communications, Inc. Monthly up-dating supplements are available for $5 each. (NL-2)

IRON PLATING. A new brochure showing the variety of uses for Vanderloy, pure iron plating process of the Van der Horst Corp., has just been released. (NL-3)

FEEDER-TYPE TRANSIT. A new brochure from the WABCO Monorail Division describes transportation subsystems, a newly developed industry providing feeder-type transit. The 8-page publication contains information on the development of monorail systems, their use, and answers questions that frequently come up in developing a system and putting it to use. (NL-4)

FRUIT AND VEGETABLE LOADING. The AAR has announced publication of a 20-page booklet called "Loading recommendations for fresh fruits and vegetables in refrigerated trailers or containers." Price is 25 cents a copy; there are reduced prices for volume orders. (NL-5)

DOCK SEALS. AirLocke Dock Seal, a division of the O'Neal Tarpaulin Co., has issued an 8-page catalog about its dock seals, which provide an airtight seal between docks and trucks or rail cars, thus helping to prevent loss of heat or conditioned air when dock doors are open. (NL-6)

BONDED MOUNTINGS. Lord Corp.'s Bulletin 712 provides information about the firm's bonded mountings to isolate vibration, accommodate shock and reduce noise. (NL-7)

ATTENTION:
R.G. LEWIS, PUBLISHER

RAILWAY AGE
350 Broadway
New York, N.Y. 10013

PLACE AIRMAIL STAMP HERE

AIR MAIL

BUSINESS REPLY MAIL
No postage stamp necessary if mailed in the United States

POSTAGE WILL BE PAID BY

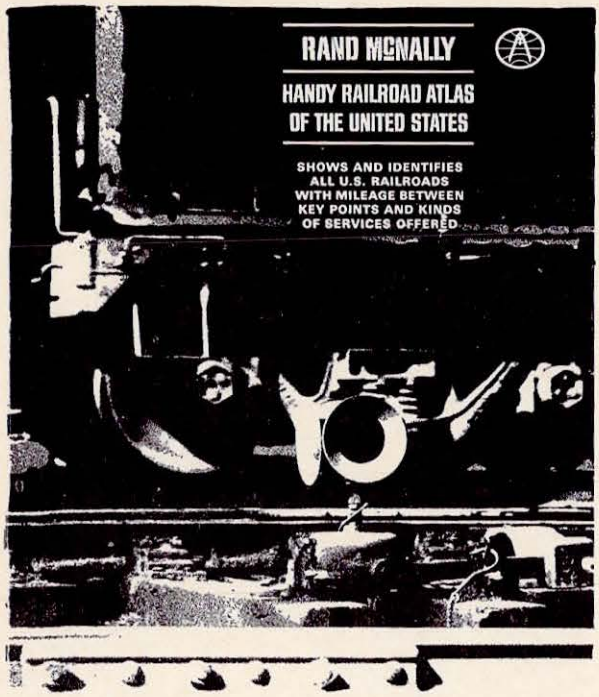
ATTENTION:
J. MEYER

RAILWAY AGE
350 Broadway
New York, N.Y. 10013

FIRST CLASS
PERMIT NO. 153
NEW YORK, N.Y.

1971
HANDY RAILROAD ATLAS

by Rand McNally. (64 pages)



The 1971 edition shows the railroads on a state-by-state basis on maps which depict all routes, junctions, terminals and major cities. All railroads—trunkline and short line—are included. Mileage between key points is indicated. New tables have been added to give information about the railroads and the states they serve, including the individual companies, their mileages and the locations of general offices. The Atlas should be a valuable reference tool for railroad officers and shippers, aiding them in day-to-day operations and long-range planning.

Price $2.95 plus 50¢ per order for shipping and handling. Order today—before you forget. F. C. Osthoff; Simmons-Boardman Publishing Corp.; 350 Broadway; New York, N. Y. 10013.

F. C. OSTHOFF
SIMMONS-BOARDMAN PUBLISHING CORP.
350 BROADWAY
NEW YORK, N. Y. 10013

Please send me _____ copy(s) of the 1971 Railroad Atlas at $2.95 per copy (plus 50¢ per order for handling and shipping charges).

I enclosed $_____ in check or money order.

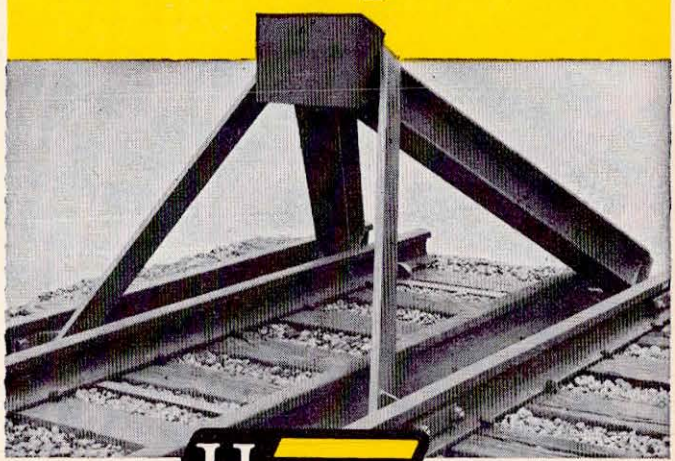
NAME .....

RAILROAD/FIRM .....

ADDRESS .....

CITY ..... STATE ..... ZIP .....

Save money 3 important ways



with Hayes Type WD

all steel **BUMPING POSTS**

1 **MADE TO SWITCH AGAINST**—Switching against the Type WD is done with the same freedom as in coupling. The WD bumping post is not merely an emergency device but a useful tool created to speed switching and reduce man hours. Informed switching crews use it.

2 **PREVENT EXPENSIVE TRACK-END DERAILMENTS**—A Hayes Type WD installation invites movement toward the track-end at the fastest speed consistent with the safety of the equipment and lading. Slow, careful and expensive "inching in" is a thing of the past.

3 **SAVE VALUABLE PROPERTY**—A Hayes Type WD is one of the strongest, most effective track-end stopping devices built on a production basis. Only Hayes *all steel* bumping posts say "stop" so emphatically. Only Hayes *all steel* bumping posts protect property so well.

Free! Ring Binder catalog provides complete details! Write today!

OTHER HAYES PRODUCTS

DERAILS

WHEEL STOPS

WESTERN-CULLEN DIVISION

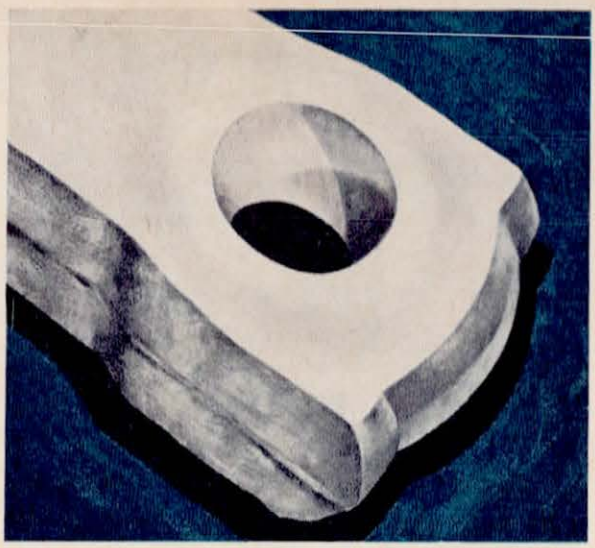
FEDERAL SIGN & SIGNAL CORPORATION

"THE FUTURISTS"

3rd & RAILROAD STS. • RICHMOND, INDIANA 47374

Canada: Woodings Canada, Ltd., 5 Place Ville Marie, Montreal 113, Que.

Circle 22 on coupon page 43



Another leader is born!

The S-613 is the undisputed champ in the F Coupler field. Our stress tests predicted the fortified shank would put muscle where it was needed!

ASF engineers achieved these remarkable results by eliminating the pin bearing block, improving the structural design and without increasing weight. Our new design is completely interchangeable with standard applications.

Several years of rugged service on ore car unit trains have proved the outstanding performance of the ASF S-613 prototype and confirmed the soundness of this engineering breakthrough.

We are pleased to announce that the AAR has granted us permission to sell 3,000 car sets (6,000 couplers) for use on interchange cars!

See your ASF representative NOW for complete details about the amazing S-613 coupler with the fortified shank.

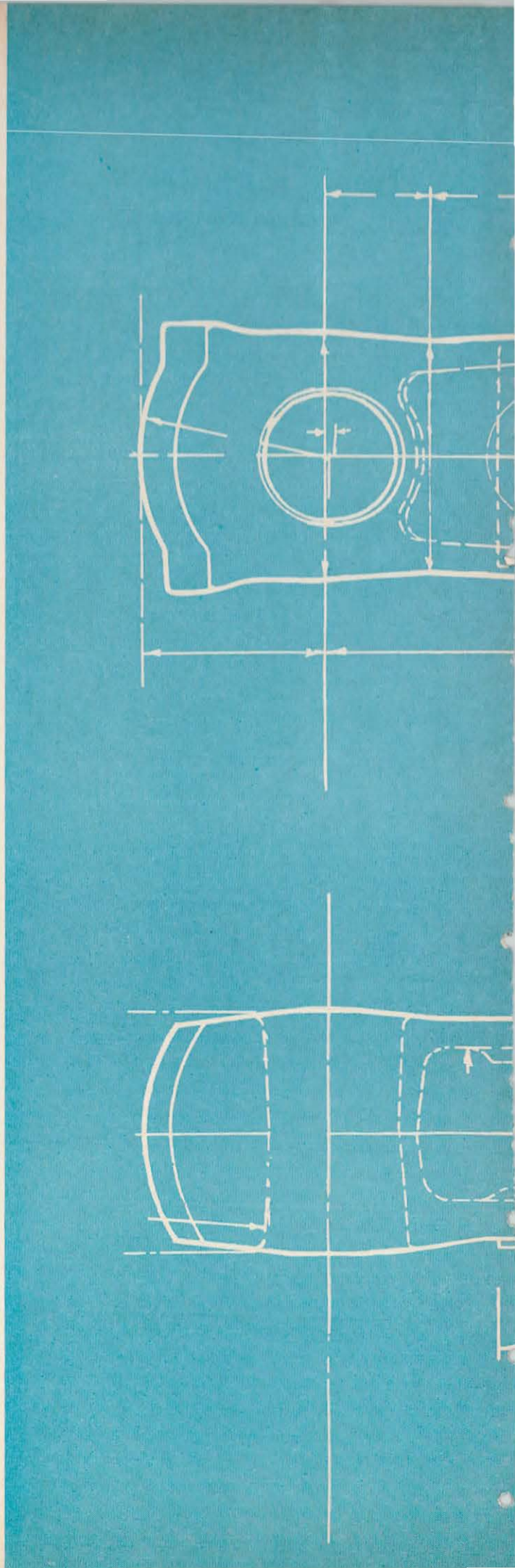
ANOTHER FIRST FROM
"the Stronger than Steel People"

American Steel Foundries
one of the Amsted Industries

ASF

PRUDENTIAL PLAZA • CHICAGO, ILLINOIS 60601
IN CANADA: IEC-HOLDEN, LTD., MONTREAL, 376, QUEBEC

Circle 19 on coupon page 43



NEW!
S-613 COUPLER
"F" TYPE
WITH
FORTIFIED SHANK!

During our twenty years of progress

N&W

Has placed five orders totaling

282

INTERNATIONAL CABOOSES

We're celebrating 20 years of caboose building. Two decades devoted to a consistent program of building safer, more comfortable, more serviceable caboose cars. Always with the emphasis on *quality*. Norfolk & Western is one of 103 railroads which—over these 20 years—have demonstrated their confidence in our abilities. In the same period, Chicago and Northwestern placed 8 orders for 237 cabooses and the Soo Line 4 orders for 55 units. We're grateful to them all.

International Car co.

835 Englewood Ave./Buffalo, New York 14223
Representatives: M. H. Frank — Cleveland, O. • Prest Company — St. Paul, Minn. • R. B. Hornberger — San Francisco, Cal. • F. E. Ross, Jr. — St. Louis, Mo. • E. J. Hasten, Jr., W. B. Reed — Chicago, Ill.
A Part of NATIONWIDE INDUSTRIES, INC.

MEMBER RPI RAILWAY PROGRESS INSTITUTE

Circle 20 on coupon page 43

People

ASSOCIATION OF AMERICAN RAILROADS.—Charles E. Taylor has joined the AAR Research and Test Department as a senior research engineer. His duties will be concerned with railroad electrification, Automatic Car Identification and other major systems studies. Mr. Taylor was formerly senior engineer at Westinghouse Electric's Ocean Research and Engineering Center, Bay Bridge, Md.

BESSEMER & LAKE ERIE—Daniel J. Humphrey appointed to the new position of pricing analyst—general commodities. He has been a management trainee in the marketing department, Pittsburgh.

Robert W. Keller, general locomotive foreman, Greenville, Pa., appointed assistant superintendent locomotive department. **Owen J. Wathan,** assistant general locomotive foreman, appointed general foreman.

BURLINGTON NORTHERN.—In the intermodal services division of the marketing department, **Emmett M. Brady** named director, intermodal planning, research and services; **William H. Egan,** director international trade sales (including Alaska and Hawaii); **Kenneth G. Heimbach,** director, domestic intermodal sales.

Robert B. Schmidt, general sales manager, autos, implements and machinery, named assistant vice president and regional sales manager, Detroit.

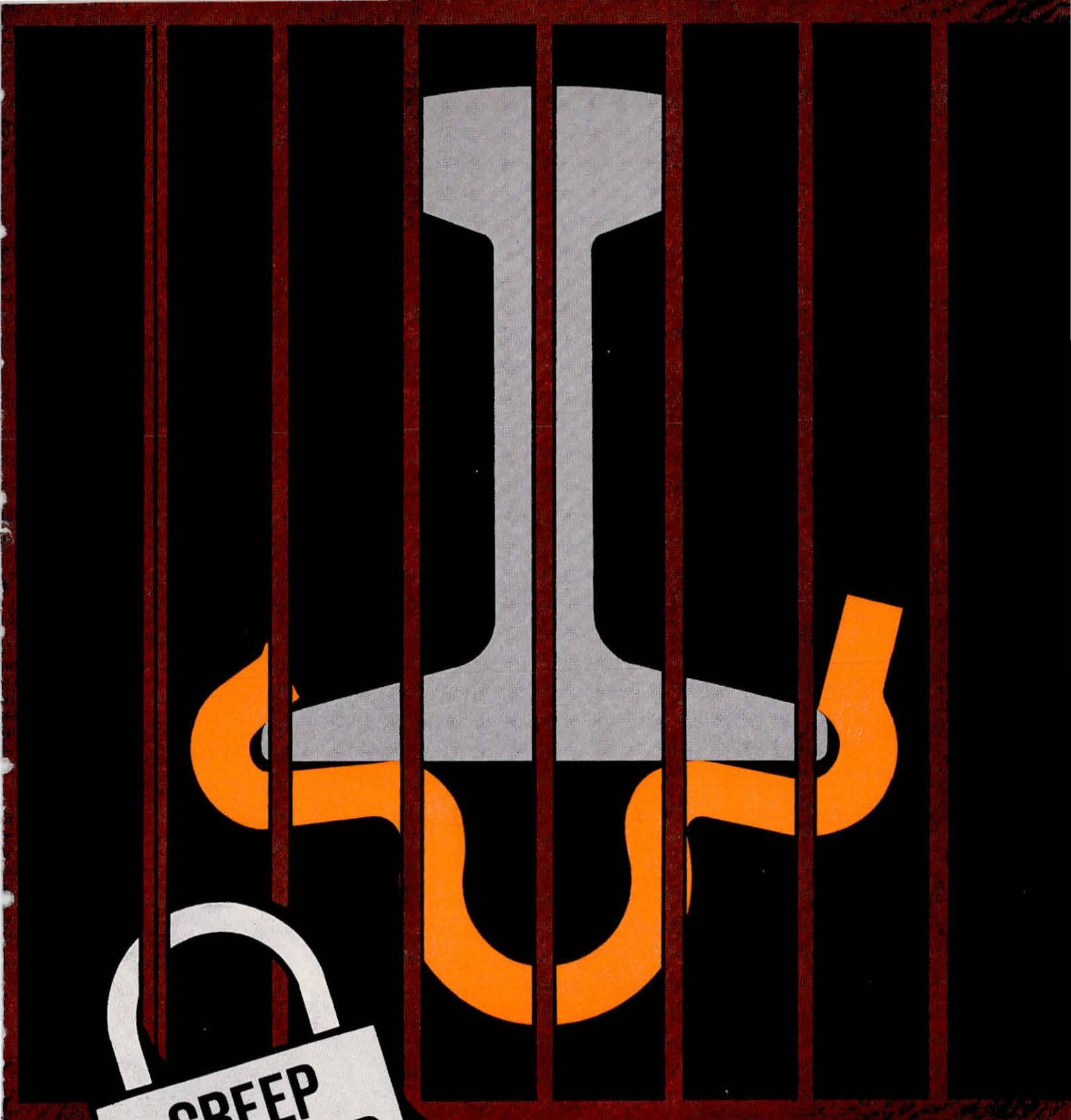
Named regional superintendents, locomotives are: **T. G. Kotnour,** Chicago region, Chicago; **W. J. Vogel,** Seattle region, Seattle; **S. F. Kuzma,** Billings region, Billings, Mont. **R. V. Propp** and **D. K. Jaeb** appointed master mechanics, Hannibal division, Galesburg, Ill., and Spokane division, Spokane, respectively.

N. M. Doerr appointed director material, St. Paul, to succeed **P. M. Hawkins,** retired. **R. E. Clayton, R. J. Hostetler, D. H. Spitz** and **R. E. Jacobson** named assistant directors material, St. Paul. **A. B. Daniels** becomes manager inventory planning and training; **C. K. Smith,** manager inventory accounting and training; **G. R. Shea,** manager inventory control; **A. E. Nelson,** traveling material manager; **H. J. Ruff,** assistant to manager catalog bureau; **J. G. Mattson,** manager retired equipment sales, all with headquarters in St. Paul. **L. R. Sullivan** appointed material manager, Aurora, Ill. **R. L. Johnson,** assistant western district material manager, named western district material manager, South Tacoma, Wash., succeeding **M. W. Bolfing,** retired. **D. N. Engelhardt,** material manager, Livingston, Mont., succeeds Mr. Johnson, and in turn is replaced by **D. K. Krajnik.**

John H. Boyd named regional director, safety and rules, Minneapolis. **R. S. Van Ness** appointed assistant to director, safety and rules, system, St. Paul.

CANADIAN NATIONAL.—Pierre Taschereau, who has served as vice president, **Canadian Transport Commission** since its creation in 1967, has returned to the CN as vice president and general counsel.

A. E. Monaghan, engineer maintenance



Woodings Rail Anchors put creep away for good.

The superior holding power is in the design. Powerful spring pressure applied to the rail base at four points, plus wide, deep tie-bearing area, holds the rail in a tight, unrelaxing grip that stops creep cold! Ballast will yield before the anchor will budge.

And for long stretches of welded rail, Woodings Rail Anchors have proved to be the best way to arrest the tremendous forces built up by thermal expansion and contraction.

Put Woodings Rail Anchors on your rails—and relax. They won't!

WOODINGS-VERONA TOOL WORKS

VERONA, PA. 15147 MEMBER RPI RAILWAY PROGRESS INSTITUTE

Circle 21 on coupon page 43

Norman B. Marvin
UP

Walter P. Barrett
UP

of way, Mountain Region, transferred to the Great Lakes Region at Toronto.

CANADIAN PACIFIC.—W. J. Riley, mechanical assistant to the senior executive officer, appointed assistant chief of motive power and rolling stock, special projects.

CHESAPEAKE & OHIO—BALTIMORE & OHIO.—Robert C. McGowan, vice president for administration and planning, Baltimore, will have over-all direction of the reorganized Real Estate Department. Mr. McGowan also has responsibility for overall direction of the data systems, purchases and materials, industrial engineering and research departments. **M. C. Mulligan,** assistant vice president—real estate, will be a member of the executive department and will concentrate on real estate matters in Washington D.C. **J. Richard Hickman,** manager—real estate, Huntington, W. Va., named general manager—real estate, Baltimore, reporting to Mr. McGowan. **Robert H. Tucker,** general real estate agent, Huntington, succeeds Mr. Hickman. **Leslie R. Long,** as special assistant—real estate, will have specialized responsibilities.

Albert B. Aftoora, senior revenues analyst, promoted to assistant treasurer of both roads. **A. L. Cummings,** assistant auditor of revenues—freight accounts, named manager, financial planning. **J. E. Mosher,** manager, financial analysis, appointed manager, long-range financial planning. Their headquarters continue in Baltimore.

Frank J. Seiz, regional sales manager-world commerce, New York, appointed director of sales—world commerce, Baltimore, succeeding **Jon M. Clark,** promoted to regional sales manager, Pittsburgh.

COLORADO & SOUTHERN.—Robert W. Downing elected chairman of the board. **I. C. Ethington** elected vice president, operating.

GULF, MOBILE & OHIO.—Bruce C. Pate, passenger traffic manager, Chicago, retired June 15, after nearly 48 years with the GM&O and its predecessors.

MILWAUKEE.—William E. Ross, assistant vice president-finance and accounting; **Clarence V. Lund,** special assistant to vice president-chief engineer; **Lyman B. Horton,** commissioner, agricultural and mineral development, retired May 31.

David C. Young, manager of joint facility accounting, named assistant comptroller, Chicago. **J. Fred Simpson,** assistant general attorney, Seattle, appointed general attorney there.

Effective June 1, the real estate and industrial development department renamed the real estate, economic and resource development department. **E. J. Stoll,** vice president-real estate and industrial development, continues to head the enlarged department. The department will handle matters relating to geology and economic resources which were previously handled by the agricultural and mineral development department, which was discontinued June 1. Functions of the latter department involving traffic and the grain industries have been assigned to the traffic department.

PENN CENTRAL.—A. Paul Funkhouser, vice president—public affairs, appointed senior vice president—sales and marketing, Philadelphia. **Edward G. Kreyling, Jr.,** vice president—sales and marketing, named vice president—marketing.

Jay McD. Gilmore, general manager, intercity passenger service, Philadelphia, named general manager, Philadelphia Commuter Area, succeeding **J. Grant Robins,** appointed general manager, Northeastern Region, New Haven, Conn. Mr. Robins succeeds **Hershel E. Ring,** who has accepted a position with the **Boston & Maine. Walter L. Butz,** assistant general manager, Northeastern Region operation in New England and New York, succeeds Mr. Gilmore. Mr. Butz will work closely with the newly formed National Railroad Passenger Corp. (AMTRAK).

Harry J. Wharton, coal sales manager, New England area, appointed assistant director—coal and ore sales for the East at Philadelphia, succeeding **Robert W. Wilkins,** retired. **Donald W. Korn,** coal and ore sales manager, Cleveland, appointed assistant director—coal and ore sales, central territory, Pittsburgh. **George E. Thomas,** assistant coal sales manager, Pittsburgh, succeeds Mr. Korn at Cleveland. **William R. Haynes,** coal sales manager, Pittsburgh, transferred to Cincinnati, succeeding **W. S. Haverkamp,** retired.

RICHMOND, FREDERICKSBURG & POTOMAC.—Anthony Grayson Leigers promoted to assistant freight traffic manager—rates, Richmond, Va.

SANTA FE.—B. W. Andrews, sales representative, mail and express traffic department, Los Angeles, appointed regional manager, mail and express traffic department, Kansas City, Mo., to succeed **E. F. Selonke,** who retired June 30 after more than 47 years' service. **Ray Gates** succeeds Mr. Andrews.

H. D. Fish, assistant general manager, Topeka, Kans., named assistant to vice president-operations, Chicago. **W. E. Brack,** superintendent, New Mexico division, Clovis, N. M., transferred to the Chicago Terminal division.

Pricing of freight services in midwestern and southwestern areas which were previously handled at Chicago, Topeka and Dallas have been consolidated at Chicago. **Robert E. Beard,** manager-divisions, named manager-pricing. **A. E. Wegner** succeeds Mr. Beard. **H. A. Woodbury** appointed assistant manager-grain pricing. **M. C. Richardson** and **J. D. Flynn** become assistant managers-pricing.

SOUTHERN.—N. K. Sneed, III, assistant general solicitor, and **James L. Howe, III,** commerce counsel, appointed general attorneys, remaining in Washington, D.C.

SOUTHERN PACIFIC—E. P. Winterrowd, senior assistant superintendent, Lafayette division, Lafayette, La., appointed superintendent to succeed **E. P. Evans,** who retired May 31 after 42 years of service.

TRAFFIC EXECUTIVE ASSOCIATION—EASTERN RAILROADS.—C. L. Smith appointed chairman, New York, succeeding **Charles S. Baxter,** who retired July 1. Mr. Smith also succeeds Mr. Baxter as president and chief administrative officer, Eastern Railroad Association.

Other appointments: **Gerald J. Robinson,** vice chairman, TEA, in addition to his duties as chairman, Coal, Coke and Iron Ore Committee—Eastern Railroads; **Aaron Cohen,** chairman, General Freight Traffic Committee—Eastern Railroads; **William J. Bolch,** assistant to chairman, General Freight Traffic Committee—Eastern Railroads; **Edward S. Magielnicki,** assistant to chairman, General Freight Traffic Committee — Eastern Railroads; **Joseph M. Feldman,** assistant member—Research Group, General Freight Traffic Committee—Eastern Railroads; **Ralph C. Nappi,** Manager, Commerce and Statistical Research Department—Eastern Railroads; and **William F. Foley,** assistant manager, Commerce and Statistical Research Department—Eastern Railroads.

UNION PACIFIC.—Norman B. Marvin, vice president-sales and service, elected vice president, handling major industrial accounts within the traffic department. **Walter P. Barrett,** vice president-rates and divisions, succeeds Mr. Marvin, and in turn is succeeded by **William J. Sullivan,** general manager-freight rates. **Harry F. Brevoort** and **Fred L. Morgan** appointed to the newly established positions of general traffic manager. Mr. Brevoort was previously traffic manager, New York, and Mr. Morgan, traffic manager, Los Angeles.

Joe W. Jarvis, supervisor of agricultural development, named supervisor of agriculture and livestock, Omaha.

John D. Glover, general traffic agent, Atlanta, named to the newly created position of traffic manager there. **Walter G. Lorys,** general traffic agent, Washington, D.C., succeeds Mr. Glover. **E. Leonard Erickson** appointed traffic manager, New York. **Edward J. Murphy** becomes traffic manager, Los Angeles. **C. Dale Chambers,** assistant freight traffic manager, Omaha, named freight traffic manager there. Mr. Chambers' successor is **Robert L. Christensen,** general freight agent, Omaha, who in turn is succeeded by **Eugene H. Newman,** market research analyst, Omaha. **Walter M. Phelps,** assistant to traffic manager, Los Angeles, named general traffic agent there.

TRANSIT

Moray Epstein, administrative coordinator of public transportation and a former newsman, has been appointed director of a new Office of Information Services, **New Jersey Department of Transportation,** Trenton, N. J.

WABCO's

new,
LOW COST,
SIMPLE,
reliable,
automatic,
PROPORTIONAL

Empty & Load freight brake equipment

Two Compact Air Valves—plus a small volume—that's all it takes to add the newest and best empty and load brake system to your present or future freight cars. The result: Upgraded braking at a minimum of expense.

WABCO's new load sensing valve reads the car's empty or loaded condition with each brake application. On a loaded car the brake cylinder receives the full amount of braking pressure called for by each brake pipe reduction. For an empty car condition, a "load proportional" valve reduces the brake cylinder pressure to a reduced percentage of that applied to a loaded car.

Brake cylinder pressure for empty and loaded cars therefore, is *proportional* over the complete range of brake pipe reductions. Brake releases are unaffected by the system.

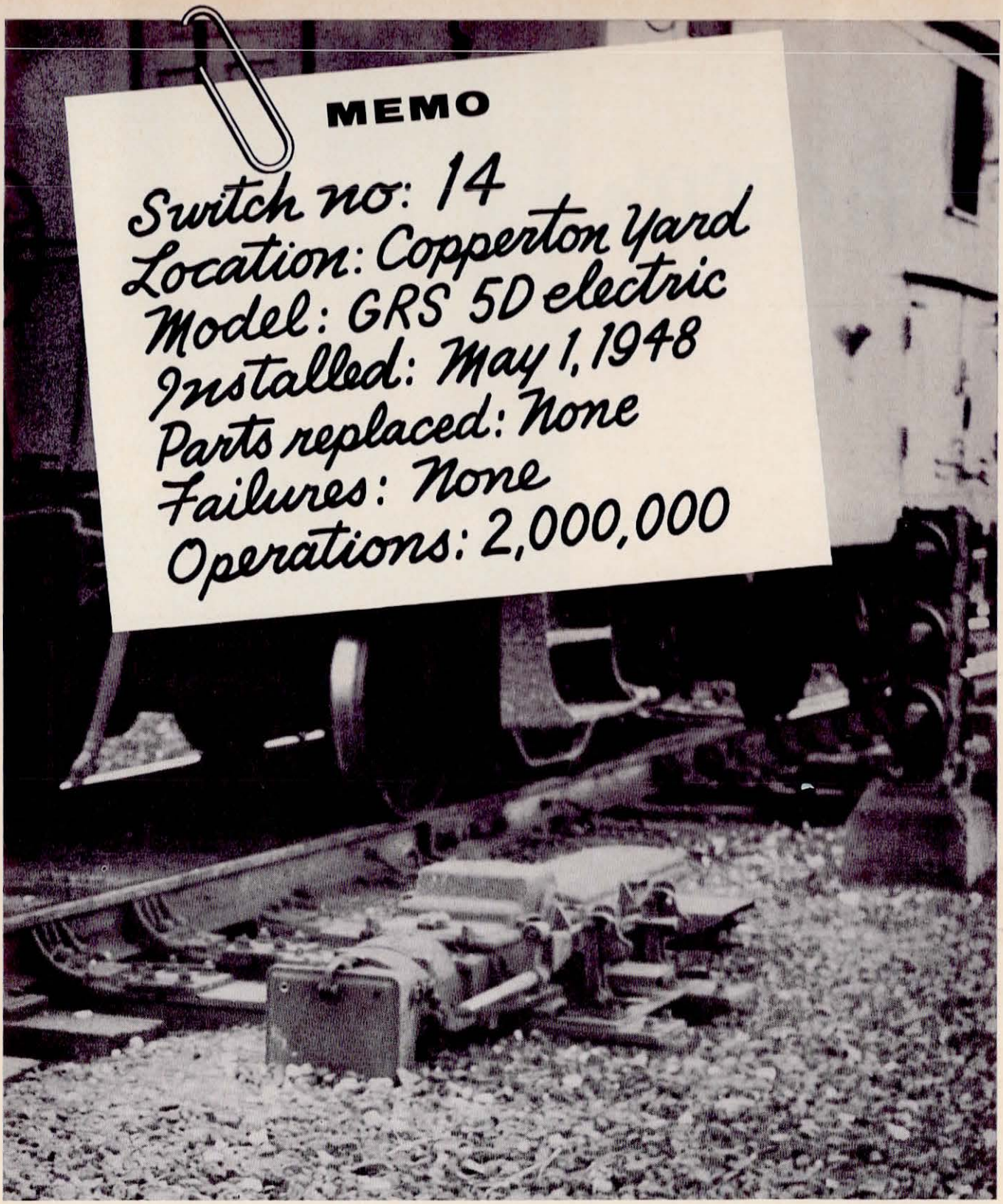
OTHER FEATURES OF THE SYSTEM:

• Unaffected by Truck Roll • Compatible with Truck or Car-mounted Brake Systems • Simple Installation and Maintenance

For more information,
write or call your local representative or the
Westinghouse Air Brake Division,
Wilmerding, Pennsylvania 15148.

WABCO
WESTINGHOUSE AIR BRAKE COMPANY
An American-Standard Company

Circle 18 on coupon page 43



GENERAL RAILWAY SIGNAL COMPANY

A UNIT OF GENERAL SIGNAL CORPORATION

3520

ROCHESTER NEW YORK 14602

ATLANTA BOSTON CHICAGO MONTREAL NEW YORK OAKLAND ST LOUIS ST PAUL

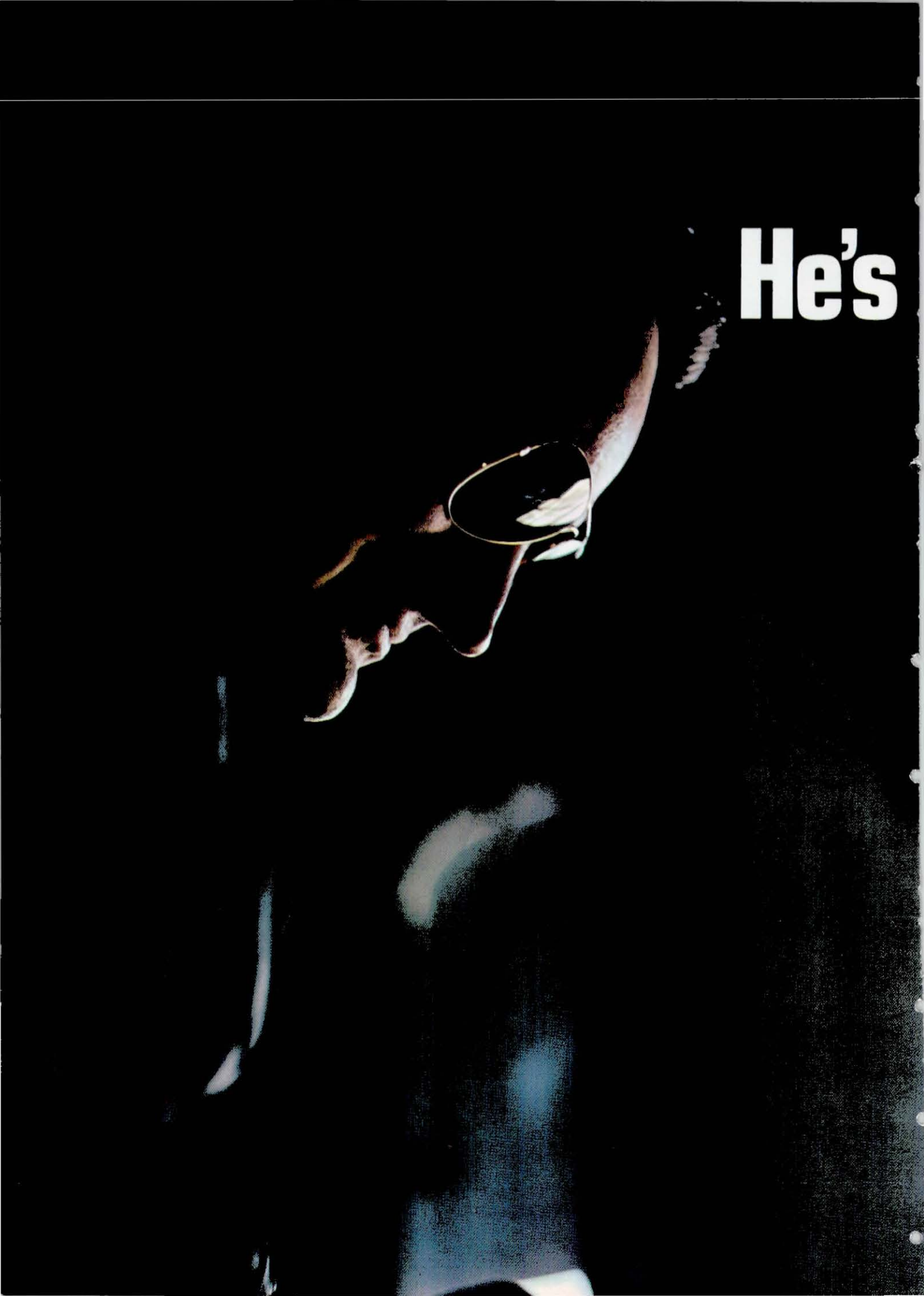
Circle 23 on coupon page 43

First Quarter Figures of Calendar Year 1971

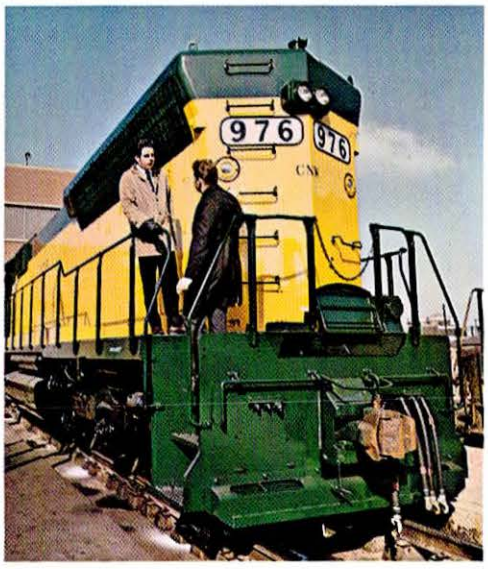
(Dollar figures are stated in thousands: i.e. with last three digits omitted)

Name of Road		Average mileage operated during period	Operating Revenues: Freight	Pass.	Total 1971	Total (inc. misc.) 1970	Operating Expenses: Maint. Way and Structures: Total 1971	Total 1970	Deprec. and Retirements	Maint. Equipment: Total 1971	Total 1970	Deprec. and Retirements	Traffic	Transportation	Total 1971	Total 1970	Operating ratio 1971	Operating ratio 1970	Net from railway operation	Railway tax accruals	Net Railway operating income 1971	Net Railway operating income 1970
Akron Canton & Youngstown	3 mos.	171	1,623	—	1,675	1,666	235	271	29	399	306	127	90	658	1,524	1,473	91.0	88.4	151	221	232	148
Ann Arbor	3 mos.	299	2 467	—	2,515	2,206	281	209	23	492	410	130	50	1,358	2,283	2,003	90.8	90.8	233	202	—266	—194
Atchison, Topeka & Santa Fe	3 mos.	12.904	177,166	3,551	191,708	179,496	26,073	27,514	2,662	39,959	36,065	11,149	4,846	70.185	151,405	146,262	79.0	81.5	40,304	18,388	15,844	11,251
Baltimore & Ohio	3 mos.	5.552	119,513	440	125.045	109,571	15,100	13,000	1,575	21,058	18,915	2.866	3,076	48,201	95,523	88 100	76.4	80.4	29,522	9,147	5,120	592
Bangor & Aroostook	3 mos.	543	3 433	61	3,550	3,816	968	930	58	1.024	1,305	438	78	1,268	3,571	3.860	100.6	101.2	—21	324	353	93
Bessemer & Lake Erie	3 mos.	221	8.052	—	8.673	5,983	1,107	780	128	2,065	1.683	525	170	2.540	6.861	5,415	79.1	90.5	1,812	753	1,151	739
Boston & Maine	3 mos.	1,515	16,250	1,527	19,213	16 817	3,180	2,827	445	3,685	3,370	632	335	8.779	16,996	16,085	88.5	95.6	2,216	1,511	—1,571	—2,759
Burlington Northern	3 mos.	23,609	201.281	5,257	217.142	192,623	29,260	26,400	3,793	41,063	37,829	11,732	6,150	97,319	189,362	169,734	87.2	88.1	27,780	19,778	2,304	2,279
CPR Lines in Maine	3 mos.	234	1,840	42	1,908	2,080	379	289	64	383	393	47	63	789	1,767	1,585	92.6	76.2	141	85	—311	92
Central of Georgia	3 mos.	1,729	15 596	113	16,071	14,360	2,752	2,283	207	2,385	2,642	731	316	4,644	10.772	10.972	67.0	76.4	5,299	2,417	2.151	1,211
Central RR of New Jersey	3 mos.	591	9 355	1.134	13,702	11.565	1,588	1,609	728	1,968	2,172	321	217	5,969	10,592	11.522	77.3	99.6	3,111	1,085	524	—3,080
Central Vermont	3 mos.	382	2,062	1	2,129	2,182	538	519	77	249	205	14	19	959	1.886	1,732	88.6	79.4	243	205	376	26
Chesapeake & Ohio	3 mos.	5,067	113,912	247	118,382	103,656	14,300	12,450	1,707	23,987	21,609	6,142	2,823	45,210	93.289	87,646	78.8	84.6	25,093	10,272	10,822	4,795
Chicago & Eastern Illinois	3 mos.	643	7,633	—	7,771	6,704	1,395	1,091	53	1.512	1,298	363	302	2,625	6,219	5,724	80.0	85.4	1.552	370	372	—299
Chicago & North Western	3 mos.	11,043	71.117	5,386	80,236	71,442	10,841	9,824	2,035	14,058	13,063	4,341	2,190	35,736	67,841	62,561	84.6	87.6	12,395	6,298	209	—1,703
Chic., Milw., St. Paul & Pacific	3 mos.	10,439	63.026	1 901	69,023	65.044	9,564	9.659	1,399	11,829	11,371	3,204	1,928	29,478	57,277	57,046	83.0	87.7	11,746	6,307	—603	—3,398
Chicago, Rock Island & Pacific	3 mos.	7.408	65.583	1 208	69,934	66,631	10,234	8,513	2,007	12,766	10,522	1,726	1,908	30.370	58.964	53,941	84.3	81.0	10,970	5,093	—4,868	—2,896
Clinchfield	3 mos.	309	9,815	—	9,893	8.365	1.031	777	80	1.461	1,311	595	273	2,582	5,665	4.906	57.3	58.7	4,228	820	2,815	2,749
Colorado & Southern	3 mos.	692	5 176	—	5,271	4,972	478	533	52	784	743	301	20	1.711	3.271	3,128	62.1	62.9	2,000	758	904	841
Ft. Worth & Denver	3 mos.	1,201	6,337	—	6,505	5,402	718	670	77	585	483	112	74	2,380	4,062	3,833	62.5	71.0	2,442	792	805	559
Delaware & Hudson	3 mos.	751	10,709	106	11,097	11.133	1,469	1,488	129	2,444	2,157	410	374	4,495	9.598	9,416	86.5	84.6	1,499	1,459	—395	—192
Denver & Rio Grande Western	3 mos.	1,899	24,431	86	24.953	22,995	2,511	2,234	394	3,969	3,734	1,290	903	7,694	16,727	15.989	67.0	69.5	8,225	4,206	3,419	3,190
Detroit & Toledo Shore Line	3 mos.	50	1.821	—	1,936	1.654	208	188	19	317	315	120	59	616	1,308	1,320	67.5	79.8	629	318	241	69
Detroit Toledo & Ironton	3 mos.	467	8,536	—	8,907	7,604	782	724	106	1,899	1,537	577	228	3,218	6.540	6,038	74.5	79.4	2,268	720	710	745
Duluth, Missabe & Iron Range	3 mos.	507	4 129	—	4.283	4,323	1,361	1,138	210	1,548	1.600	539	65	2,062	6.159	5,551	143.8	128.4	—1,876	230	—1,220	—1,106
Duluth, Winnipeg & Pacific	3 mos.	170	2.587	—	2,609	2,679	309	232	17	212	125	2	63	858	1,502	1,274	57.6	47.6	1,107	464	511	486
Elgin, Joliet & Eastern	3 mos.	205	11 938	—	17,805	14,714	1,042	1,397	75	2,150	2,424	1.506	207	6,882	12.398	11,673	69.6	79.3	5,406	2,727	1.623	356
Erie Lackawanna	3 mos.	2,866	59,253	2.853	66,203	59,279	6.131	6,454	738	11,244	10,576	1,839	1,418	30,491	52.160	51.503	78.8	86.9	14,043	5,370	1.307	—3,748
Florida East Coast	3 mos.	554	8,625	—	8.776	7,837	3,001	2,680	195	937	1,340	263	207	1,908	6.537	6.719	74.5	85.7	2,239	615	687	90
Georgia Railroad	3 mos.	331	3,043	1	3,163	2,332	391	349	32	358	364	97	139	1,028	2 091	1,840	66.1	78.9	1,061	173	518	170
Grand Trunk Western	3 mos.	946	19,781	285	20.939	17,620	2,345	2,163	207	3,373	3,137	154	418	10,746	18,327	17.567	87.5	99.7	2,612	2,035	—4,176	—5,074
Green Bay & Western	3 mos.	255	1.900	—	1.955	1,651	187	144	22	249	220	52	131	642	1.382	1,212	70.7	73.4	573	248	161	77
Gulf, Mobile & Ohio	3 mos.	2,734	24,985	353	26,660	26,283	3,393	3,465	303	5,489	5,103	1,439	943	9,028	20.051	19,687	75.2	74.9	6,608	2,310	2,582	2,710
Illinois Central	3 mos.	6,761	81,593	4,501	89,354	79,968	12.358	10,122	1,588	16,024	14,441	4.069	2,112	33,288	69,498	62,943	77.8	78.7	19,856	8,594	6,041	6.613
Illinois Terminal	3 mos.	396	2,832	—	3,219	2.787	324	309	9	449	450	83	85	1.157	2.228	2.194	69.2	78.7	991	223	519	—14
Kansas City Southern	3 mos.	1,667	23,611	—	25,072	22,123	2,560	2,145	266	3,895	3,432	1,187	894	8,550	16.990	14,646	67.8	66.2	8,082	2,494	3,120	2,866

(Continued on page 56)


He's

your man.



We call him our Service Engineer.

He's just one of the Electro-Motive service people assigned specifically to your railroad.

EMD Service Engineers are at your service, especially when new locomotives are delivered, to make sure they're ready to go to work. And they bring your key operating people up to date on new components, new maintenance techniques and new operating methods.

Day-to-day service assistance is always available to you through the Service Engineer and his boss, the District Engineer. He's your man, too. And he's ready to help whenever he can in your service operations.

Our on-the-job service people represent just one more segment of Electro-Motive's total commitment to the railroad industry.

GM
MARK OF EXCELLENCE

Electro-Motive Division
La Grange, Illinois

First Quarter Figures of Calendar Year 1971

(Dollar figures are stated in thousands: i.e., with last three digits omitted)

Name of Road		Average mileage operated during period	Operating Revenues				Operating Expenses										Operating ratio		Net from railway operation	Railway tax accruals	Net Railway operating income	
							Maint. Way and Structures			Maint. Equipment												
			Freight	Pass.	Total 1971	(inc. misc.) 1970	Total 1971	Total 1970	Deprec. and Retire-ments	Total 1971	Total 1970	Deprec. and Retire-ments	Traffic	Trans-portation	Total 1971	Total 1970	1971	1970			1971	1970
Lake Superior & Ishpeming	3 mos.	117	94	—	304	544	254	218	56	382	366	182	8	340	1,134	1,002	372.8	184.3	—830	176	—838	—528
Lehigh Valley	3 mos.	927	11,354	—	11 657	12 007	1,577	1,592	291	2,279	1,935	351	377	5,597	10,663	10,991	91.5	91.5	993	1,037	—1,822	—2,015
Long Island	3 mos.	322	2,257	19,931	23,031	22,327	4,081	3,781	280	7,552	7,010	1,075	146	16,879	30,681	27,709	133.2	124.1	—7,650	1,949	—11,016	—8,012
Louisville & Nashville	3 mos.	6,062	96,303	185	99,044	90,258	13,746	12,733	1,286	20,836	18,354	7,361	2,311	37,910	80,202	73,719	81.0	81.7	18,842	6,816	8,643	7,355
Maine Central	3 mos.	921	7,009	—	7,250	6,893	1,505	1,242	90	1,522	1,361	273	119	2,645	6,208	5,736	85.6	83.2	1,042	509	445	361
Missouri-Illinois	3 mos.	333	1,803	—	1,821	1,754	183	306	9	653	730	346	45	370	1,349	1,633	74.1	93.1	472	560	858	777
M-K-T Lines	3 mos.	2 609	17 148	—	17,730	16,146	2,536	2,498	384	2,153	1,984	344	838	6,582	12 963	12,612	73.1	78.1	4,767	1,367	325	—1,223
Missouri Pacific	3 mos.	8,905	95,312	92	99,760	89,517	13,278	12,836	1,507	17,747	15,211	3,981	2,352	35,131	73,223	66,334	73.4	74.1	26,537	7,153	8,179	7,740
Monon	3 mos.	540	5,767	—	5.945	5.726	692	684	73	987	906	199	265	2,304	4,627	4.409	77.8	77.0	1,319	471	126	267
Monongahela	3 mos.	193	1.635	—	1.671	1,392	291	282	37	149	173	20	3	448	925	1,013	55.4	72.8	745	101	470	16
Norfolk & Western	3 mos.	7,595	188,395	255	194,691	172,566	20,047	16,726	2,564	34.804	30,409	12.928	4,047	67,523	135,438	126,316	69.6	73.2	59,253	19,966	30,902	24,269
Norfolk Southern	3 mos.	624	3,438	—	3.515	3,031	622	560	83	564	473	180	162	1,097	2,734	2,408	77.8	79.5	782	271	290	167
Northwestern Pacific	3 mos.	323	2.488	5	2.504	2.165	881	890	61	101	111	3	19	979	2.109	1,933	84.2	89.3	395	227	—339	—447
Oregon Electric Ry.	3 mos.	186	1.360	—	1,446	1.252	250	213	27	87	50	—	6	549	924	816	63.9	65.2	522	117	3	—34
Penn Central (est.)	3 mos.	20,119	374,080	29,711	443,487	402,972	61,026	53,852	7,485	98,426	78,883	15,433	5,002	221,621	412.823	386,640	93.1	96.0	30,664	38,874	—68,093	—65,796
Penn-Reading Seashore Lines	3 mos.	314	1.801	23	2.047	2.258	505	487	66	310	360	36	19	1.475	2.419	2.494	118.2	110.4	—372	173	—1,036	—1,070
Pittsburgh & Lake Erie	3 mos.	211	8.481	15	9.198	8 680	1,323	1.275	198	4,141	3,123	1,632	173	3.850	10.130	8.949	110.1	103.1	—932	1,609	4.008	2,751
Reading	3 mos.	1,210	23,553	2,227	28,372	26,276	4,251	4.290	685	5,525	5,128	1,238	671	12,828	25,200	24,964	88.8	95.0	3,172	2.700	—2,088	—3,076
Richmond, Fred. & Potomac	3 mos.	118	5 362	791	6.825	6.742	771	650	106	874	944	302	97	2.169	4,476	4,634	65.6	68.7	2,349	1,315	1,071	1,030
St. Louis-San Francisco	3 mos.	4,761	50,014	—	51,879	44,815	7,520	5,804	1,041	7,799	6,285	2,396	1,624	18,734	38,410	34,275	74.0	76.5	13,469	4,310	5,264	4,652
St. Louis Southwestern	3 mos.	1,519	34,338	—	34,762	29,926	3,106	3,175	267	5,944	5,569	2,831	729	10,535	21,147	20,562	60.8	68.7	13,615	5,455	10,895	6,721
Seaboard Coast Line	3 mos.	9,209	129,893	4,504	139,593	129,180	18,888	16,572	1,394	24,910	23,609	6,319	3,569	49,229	103,702	97,170	74.3	75.2	35,892	12,068	12,794	9,799
Soo Line	3 mos.	4,693	28,320	—	28,835	26,141	4 084	3,732	359	3,990	4,028	936	840	10,677	20,886	20,156	72.4	77.1	7,950	3,209	2,463	1,787
Southern Railway	3 mos.	6,026	103,691	742	108 284	93,828	15,336	12,792	1,309	18,339	18,417	6,561	2,144	33,912	74,272	69,629	68.6	74.2	34,012	12,554	17,579	13,533
Alabama Great Southern	3 mos.	528	11,363	68	11,836	10,382	2,349	2,149	213	1,988	2,037	741	230	3 063	8,144	8,140	68.8	78.4	3,692	1,086	1,665	853
Cinn. New Orleans & Tex. Pac.	3 mos.	415	14,887	2	15,782	13,755	1,573	1,265	223	3,252	3,162	1,410	299	3,985	9,661	8,999	61.2	65.4	6,122	2,183	3,700	3,046
Georgia Southern & Florida	3 mos.	454	4.966	—	5,201	4,333	1,490	524	37	483	335	122	99	1,319	3,560	2,290	68.5	52.9	1,641	260	372	689
Southern Pacific	3 mos.	11,615	238,176	2,162	245,957	221,525	32,560	25,888	2,733	52,094	42,212	15,232	4,055	94,203	197.590	174,811	80.3	78.9	48,366	21,558	14,301	15,671
Texas Pacific	3 mos.	2.134	24,563	—	25.867	21.941	3,394	2,646	326	4,790	3,926	1,409	824	9,881	19,872	16.636	76.8	75.8	5,996	1,820	2,783	2,277
Toledo, Peoria & Western	3 mos.	239	2,624	—	2,719	2.497	361	242	16	278	237	61	205	912	1,950	1,736	71.7	69.5	768	272	228	216
Union Pacific	3 mos.	9,473	163,309	1,645	172,189	156,445	20,306	17,581	1,952	34,872	31,499	13,454	4.293	61,504	133,995	121,700	77.8	77.8	38,194	18,262	22,178	19,410
Western Maryland	3 mos.	865	13.121	—	13,956	12.888	2,061	1,851	198	3,349	3,286	915	487	5,108	11,907	11,398	85.3	88.4	2,049	1,104	1,208	1,592
Western Pacific	3 mos.	1,187	16.227	—	17,087	15.195	2.729	2.415	289	3,384	3,790	956	812	6,564	15.042	15.592	88.0	102.6	2,045	1.523	—649	—2,368

Market Outlook

CARLOADINGS

Loadings of revenue freight in the week ended June 26 totaled 553,295 cars, according to the Association of American Railroads. This was an increase of 26,731 cars, or 5.1%, compared with the previous week, and a decrease of 5,977 cars, or 1.1%, compared with the corresponding week last year. Ton-miles generated by carloadings in the week ended June 26 are estimated at 15.7 billion, an increase of 1.2% above the corresponding week of 1970.

REVENUE FREIGHT CARLOADINGS

Commodity	June 26 week	June 19 week
Grain	30,294	27,826
Farm products	12,188	12,346
Metallic ores	51,730	50,988
Coal	108,381	80,341
Crushed stone, gravel & sand	34,632	34,375
Nonmetallic minerals	10,373	10,880
Grain mill products	17,638	18,484
Food & kindred products	23,941	24,670
Primary forest products	24,157	24,774
Lumber & wood products (except furniture)	15,946	16,773
Pulp, paper & allied products	24,201	23,869
Chemicals & allied products	23,640	24,412
Petroleum products	9,272	9,707
Stone, clay & glass products	20,237	20,323
Coke	8,436	8,988
Metals & products	27,676	28,115
Motor vehicles & equipment	23,118	24,736
Waste & scrap materials	14,248	15,118
Forwarder & shipper assn. traffic	7,005	5,728
All other carloads	65,595	63,569
LCL traffic	587	542
Total cars loaded	553,295	526,564

CUMULATIVE TOTAL, 25 weeks	1971	1970	1969
	13,151,031	13,623,232	13,871,929
Estimated revenue ton-miles (billions) 25 weeks	379.9	383.7	381.1

PIGGYBACK LOADINGS

U.S. piggyback loadings for the week ended June 19 totaled 23,448 cars (9.5% below the corresponding week last year) and 38,803 trailers or containers (down 8.0% from 1970). Cumulative volume for the first 25 weeks of 1971 is 562,004 cars (off 6.9% from last year) and 909,634 trailers or containers (down 6.6% from 1970). In addition to freight, 2,906 cars carrying 4,383 trailers or containers of mail and express traffic were handled piggyback. Cumulative figures for the first 25 weeks of 1971 are 80,441 cars (down 5.3% from the 1970 total), and 119,702 trailers or containers (down 11.0% from 1970).

IN CANADA

7 days ending	Tons of Revenue Freight	Cumulative Totals
June 14, 1971	4,523,108	88,784,737
June 14, 1970	4,302,637	88,329,851

TRANSIT

● *BART.*—Awarded a contract valued at $375,000 to Gulton Industries, Inc., Engineered Magnetics Division, to develop a dynamic track analyzer system adapted to Bay Area Rapid Transit requirements. The system is designed to measure track gauge, profile, alignment, super elevation and platform edge clearance by use of sensors which scan appropriate rail surfaces as the analyzer car moves along the track. Electro-mechanical servo system maintain the sensors at a predesignated distance from the rail and measure changes in rail position. Data from these sensors are fed into a computer which gives continuous and permanent records, as required. Both graphical and numerical read-out of the test data are provided.

● *Metropolitan Transportation Authority* (New York).—Ordered 200 high-speed, air conditioned electric cars from General Electric for service on the Long Island (152 cars) and Penn Central's Hudson-Harlem divisions. Two hundred car sets of temperature control and door-operating systems have been ordered for the cars from Vapor Corp., division of the Singer Co.

FREIGHT-TRAIN CARS

● *Serviceable cars.*—Revenue freight cars in serviceable condition owned by Class I railroads on June 1 totaled 1,352,369, compared with 1,352,320 on June 1, 1970, according to most recent AAR Car Service Division report. Estimated total ownership of all railroad- and privately-owned freight cars on June 1 (see table below), was 1,775,038 (average capacity: 67.66 tons), compared with 1,785,736 (average capacity: 65.91 tons), on June 1, 1970.

ESTIMATED OWNERSHIP—ALL REVENUE FREIGHT CARS

(June 1, 1971 vs. June 1, 1970)

		Box	Covered Hopper	Gondola	Hopper	Flat	Refg.	All Other	TOTAL
Class I	1971	531,477	134,311	185,612	390,394	75,374	64,517	49,366	1,431,051
	1970	544,363	128,060	190,468	392,276	72,122	54,850	51,759	1,433,898
RRO&C Refgs.*	1971	0	0	0	0	0	34,369	0	34,369
	1970	0	0	0	0	0	45,453	0	45,453
All Other Private	1971	1,183	39,700	2,933	2,744	52,100	16,259	170,734	285,653
	1970	1,193	34,973	2,307	2,321	50,276	14,816	176,151	282,037
Class II & S&T Cos.†	1971	9,109	812	4,208	6,904	509	1,465	958	23,965
	1970	9,190	717	4,299	7,160	527	1,458	997	24,348
GRAND TOTAL	1971	541,769	174,823	192,753	400,042	127,983	116,610	221,058	1,775,038
	1970	554,746	163,750	197,074	401,757	122,925	116,577	228,907	1,785,736

* Railroad owned and controlled refrigerator car lines.
† Class II railroads and switching and terminal companies.

● *Green Bay & Western.*—Ordered 20 70-ton, 50½-ft waffle-side box cars from Pullman-Standard for delivery in November 1971.

● *Penn Central.*—Will start taking delivery Oct. 1, of 567 new 70-ton freight cars to be leased from United States Railway Leasing Co. and built by U.S. Railway Equipment Co. The cars will be fitted with four different types of Evans load-securing devices and CushionPak underframes. Delivery is to be completed by April 1972.

● *Orders and deliveries.*—Orders were placed for 6,670 new freight cars in May, compared with 4,107 in the preceding month and 2,387 in May 1970. New cars on order and undelivered on June 1 totaled 24,944, compared with 23,563 on May 1 and 31,046 on June 1, 1970.

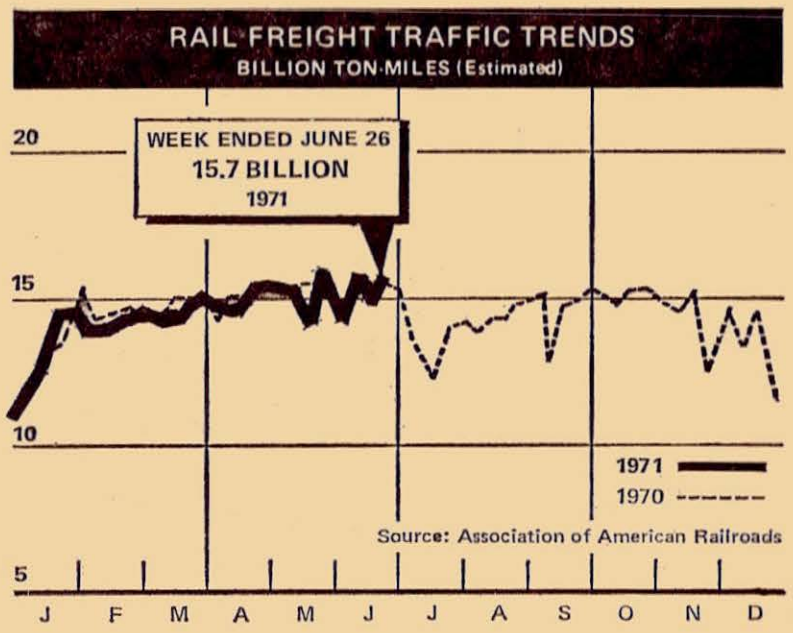
FREIGHT TRAIN CARS DELIVERED AND ORDERED AND BACKLOG OF ORDERS

	May 1971	April 1971	May 1970
DELIVERED			
Built new by carbuilders	4,381	4,431	4,227
Built new in R.R. shops	871	1,066	1,605
Built new—total	5,252	5,497	5,832
Rebuilt	213	367	602
TOTAL DELIVERED	**5,465**	**5,864**	**6,434**
ORDERED			
To be built new by carbuilders	6,570	3,782	2,218
To be built new in R.R. shops	100	325	169
To be built new—total	6,670	4,107	2,387
To be rebuilt	60	1,185	2,046
TOTAL ORDERED	**6,720**	**5,292**	**4,433**
ON ORDER AND UNDELIVERED	**June 1, 1971**	**May 1, 1971**	**June 1, 1970**
To be built new by carbuilders	21,227	19,059	24,299
To be built new in R.R. shops	3,717	4,504	6,747
To be built new—total	24,944	23,563	31,046
To be rebuilt	2,800	2,963	6,947
TOTAL ON ORDER	**27,744**	**26,526**	**37,993**

NEW FACILITIES

● *Burlington Northern.*—Awarded a $1,275,000 contract to Max J. Kuney Co., Spokane, for construction of the 930-ft Indian Canyon bridge at Spokane. The project is part of an over-all $15-million construction and line-relocation program in the Spokane area (RA, March 8, p. 25). Indian Canyon bridge will be of steel box girder construction with a concrete deck supported by single-column concrete piers. Steelwork will be fabricated by Canron, Ltd., Vancouver, B.C.

● *Griffin Steel Foundries Ltd.*—This Canadian operating unit of AMSTED Industries will expand its Transcona, Man., plant to provide capability for producing large-diameter freight-car wheels. Construction will begin this summer, with completion scheduled by the end of 1972.



NEW ORDERS FOR MACHINE TOOLS*

	MAY 1971 ($000)	MAY 1970 ($000)	5 mos. 1971 ($000)	5 mos. 1970 ($000)
Metal cutting tools	45,350	52,750	206,400	343,000
Metal forming tools	25,450	16,250	101,550	117,800

MACHINE TOOL SHIPMENTS*

	MAY 1971 ($000)	MAY 1970 ($000)	5 mos. 1971 ($000)	5 mos. 1970 ($000)
Metal cutting tools	52,850	97,100	306,500	459,550
Metal forming tools	27,550	46,100	146,700	202,100

**Including foreign and domestic.*
Source: National Machine Tool Builders' Association.

Viewpoint

One weak link in the unity chain

"Gentlemen," Ben Franklin said, "we must all hang together— or assuredly we shall all hang separately."

Old Ben allegedly said that at the signing of the Declaration of Independence in 1776. Were he still around, he might well say it again —and, at the same time, he might well be proud of the "hanging together" of the transportation industry today.

Railroads are united as they have never been before—mostly in the context of ASTRO, but also in other things. There are signs that the whole complex of transportation has reached a never-before-achieved degree of unity as to what has to happen if tomorrow's transportation demands are to be satisfied. Both the Executive branch and the Congress now seem willing to recognize that the industry has problems which only government can solve.

If there is a discordant note, it comes from rail labor. And it's time that discord became concord.

Right now, railroads are trying to build grass-roots support for ASTRO. All railroad employees—excepted and contract alike—are being asked to talk with their neighbors, in the interest of building broad-based backing for ASTRO's transportation reforms. But the June 26 issue of *UTU Transportation News* advises UTU members that "this is no time to pull the carriers' chestnuts out of the fire—at the expense of UTU and other union members. You could be writing yourself out of a job if you follow the carriers' suggestions to write to your Congressmen."

At the same time, the Brotherhood of Locomotive Engineers is declaring "Let's not argue about the cause [of the industry's poor health]; let's try to discover the cure." The BLE doesn't go all the way with the railroads. But by comparison with what UTU is putting out to its members, the BLE goes a far piece.

NO INVIDIOUS COMPARISON

In this complex business, you don't win friends—or, probably, influence many people—by holding up one union's efforts as admirable while knocking down another's as objectionable (especially when the unions are as competitive as UTU and BLE). And yes, perhaps the positions of both organizations are affected by the fact that the BLE has signed a new agreement while the UTU, unsigned, is threatening a strike. But there appears to be something that runs deeper than this. And it's most disturbing.

BLE Grand Chief Charles Coughlin observes that "Our welfare depends upon the good health of the industry. Our paychecks and our pensions and our health-and-welfare benefits are at stake as long as the present illness [of the industry] continues. So we have a mighty powerful interest in seeing the patient get well."

That would seem to be a viewpoint on which unanimity could be achieved. It would seem to be, and it should be.

Actually, however, nobody—in rail management or at Railway Age—has any particular interest in installing a halo on one union and horns on another. The "particular interest" lies simply in describing why transportation reforms are needed, what they involve, and why they deserve the active support of the half-million-plus people who work in, for and with the railroad industry.

SUPPLY TRADE

Dr. Murrell L. Salutsky has been appointed executive vice president, **Dearborn Chemical Division, W. R. Grace & Co. Stanton E. Deeley** has been named marketing manager.

The following have joined **Unit Rail Anchor Co.,** Pittsburgh, Pa.: **John Schumaker,** manager of sales, and **Harry Lorsch,** sales and service engineer.

Gary E. Landrio, accountant executive, **Fulton National Group,** New York, has been appointed to the newly created position of director railroad operations.

Frank A. Scott, assistant eastern sales manager, **General Railway Signal Co.,** New York, appointed district manager, sales office, Boston, Mass., succeeding **S. M. Latone,** appointed manager, Application Engineering Department, Rochester, N.Y.

Kenneth L. Semple has been appointed sales manager, **L. A. Clarke & Son, Inc.,** Washington, D.C.

Thomas J. Johnson, sales representative, **American Steel Foundries,** St. Louis, has been appointed district sales manager there.

John K. Stanton, Jr., sales representative, **Griffin Wheel Co.,** St. Louis, has been named district sales manager there.

A. Joe Upton has been appointed regional manager—commercial products, **Huck Manufacturing Co.,** at Union, N.J. **A. Charles Shikany** has been named western regional manager, Detroit, Mich.

Ed Koepke, field sales manager, Construction Machinery Division, **American Hoist & Derrick Co.,** St. Paul, has been named industrial sales manager. He will be responsible for the sales of locomotive cranes and revolving cranes to industrial and railroad markets, as well as the various specialized markets where they are applicable.

George O. Whitesell has been appointed vice president—sales, **Chromium Corporation of America,** Cleveland. Mr. Whitesell has been sales manager and will continue that assignment.

John Salathe, Jr. has been named general manager, **Renton Railroad Car Manufacturing Division, Pacific Car & Foundry Co.** Mr. Salathe was formerly assistant general manager of the division.

Joseph F. Sloat has been named assistant sales manager, **Railway Products division, Chemetron Corp.**

John F. Kelley, treasurer, **Pullman Incorporated,** has been elected vice president and treasurer. **J. R. Odom** has been named assistant controller, and **J. E. Rooney,** assistant treasurer.

Thermo King Corp. has named **Dale Palm,** manager, national accounts; **Richard Mason,** national dealer sales manager; **Roland G. Schaal,** sales manager, midwestern division; **William L. O'Mary,** sales manager, southeastern division; **Howard Kunkle,** manager, railroad division, and **Paul Richardson,** manager OEM accounts.

Robert V. Lawrence, chief metallurgist, **Brenco, Incorporated,** Petersburg, Va., has been appointed director of metallurgy.

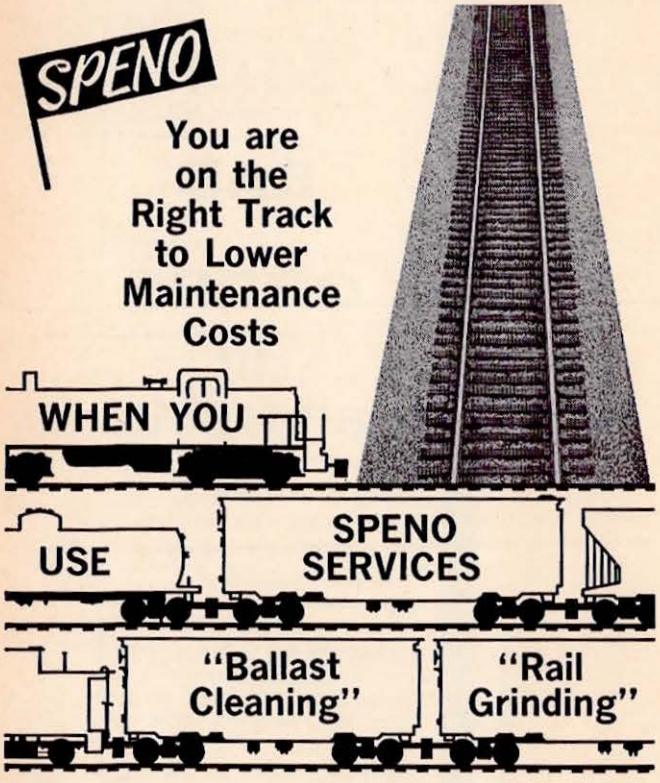
The name of **Steadman Industries Limited,** Toronto, Ont., Canada, was changed to **Interpool International Limited** on June 7.

Kenneth Llewellyn has been appointed general sales manager, **Van der Horst Corp.,** Olean, N.Y.

Robert D. Peters has been appointed sales manager, **Hunt-Spiller Manufacturing,** South San Francisco. Mr. Peters will be involved with diesel engine replacement parts for railroads.

Ward H. Speer has been named to the newly created position of director-special products, **Amcar division, ACF Industries.** He was formerly industrial and construction marketing manager, electrical division, **H. K. Porter Co., Inc.,** Pittsburgh.

Rails Limited is the new name for **L. J. Gruber & Co.,** Chicago. **John J. Hickey** is president; **Louis J. Gruber** and **John B. Braham,** associates.



"Just Ask the Railroads That Use Our Services"

Frank Speno Railroad Ballast Cleaning Company, Inc.
306 North Cayuga St., Ithaca, New York 14850
Clark St. East Syracuse, New York Box 219 13057

Speno International, S. A.
22 Parc Chateau Banquet, Geneva, Switzerland.
(For Operations Outside the North American Continent)

MEMBER RPI

IEC-Holden Ltd.
8180 Côte de Liesse Road
Montreal, 376 P. Q. Canada

Circle 25 on coupon page 43

not every railroad man knows this

. . . but if maintenance is his job he should know that the only full line of lube and fuel filters for railroads is made by Wix Corporation. All made to engine builder specs. Please pass the word. You might get somebody out of a pickle. Wix Corporation, Gastonia, North Carolina 28052.

WIX

Circle 26 on coupon page 43

Railroads at midyear: Breakthrough in '71?

(Continued from page 24)

highs. Operating expenses, however, may surge ahead by just less than 10%.

● **Earnings.** Ordinary net income rose 147.3% in first-quarter 1971; but that looks good only when contrasted with 1970's bedrock figures. Excepting 1970, this past first-quarter's $35.9 million was the lowest profit in 10 years. There was some improvement in second quarter, due to relief in passenger service provided by Amtrak along with other economies, but the prospects for further inprovement this year are not good. Taking into account PC's expected loss of $241 million this year, a bullish guess would place 1971 earnings near $400 million, a rate of return of 2.4%.

● **Capital spending.** Action now pending in Washington could turn capital investment dramatically upward. It's estimated, for example, that reinstatement of the investment tax credit would add 10,000 new freight cars on an annual basis; and further relief, in the form of Federally-insured equipment loans or one of the substitute proposals now on Capitol Hill, could add another 15,000. But at the present rate of ordering, car orders this year will total around 55-60,000 (including the 7,000-plus to be acquired by Penn Central through lease). Capital spending of Class I railroads will not be much, if any, higher than last year's $1.35 billion (a figure which does not include leased or private-carline equipment).

● **Labor.** Rail management/labor relations at midyear show what has come to be almost a normal coexistence between war and peace.

Over the short term, the situation looks grim. But over the long term, prospects for peace—and genuine management/labor accomplishments—may be brighter than they have been for a long time.

On the grim side:

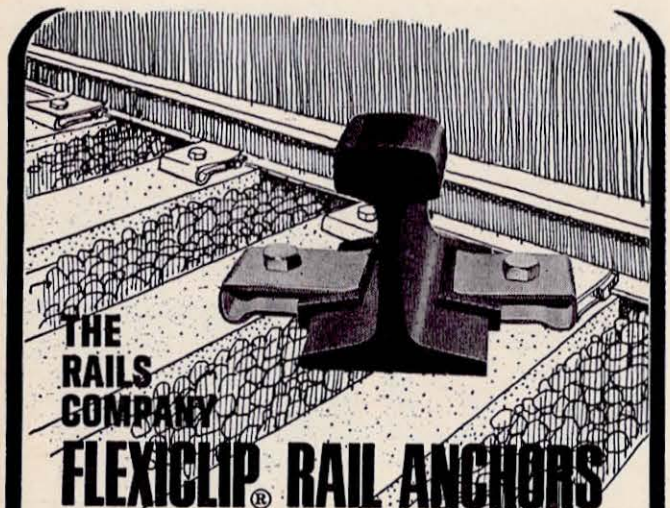
—The United Transportation Union has called a strike for July 16 against three roads (Union Pacific, Chicago & North Western and Southern). This is a wage/rules dispute, but rules changes and not wage increases are the sticking point.

—Mediation efforts continue in the dispute with the Brotherhood of Railroad Signalmen, with the next session set for July 14. BRS staged a brief strike earlier this year, and is now under Congressional order to take no further strike action before Oct. 1. Wage demands are the hangup in this case.

—Talks are continuing at the national level with the six shopcraft unions. Nobody is saying much about how the negotiations are going. But it might be recalled that, in the two most recent shopcraft "settlements," agreement was reached through crisis and Congressional intervention.

On the bright side, there is one great hope:

—Agreements reached with organizations representing about 50% of contract employees carry moratorium provisions stretching to mid-1973. It is hoped that agreements yet to be reached will follow a similar pattern. The obvious benefit will be labor peace, the absence of crisis for a clearly defined period. But the real benefit may come through the opportunity which peace will provide for a thorough-going study of the work-rules problem. Last November, an emergency board recommended creation of a high-level standing committee (made up of management and labor members with a neutral as chairman) to seek "long-range reforms and solutions to numerous labor-relations problems in the railroad industry." This same board recommended a number of specific work-rule changes, and the Brotherhood of Locomotive Engineers has in fact approved an agreement incorporporating many of those changes. ■



THE RAILS COMPANY

FLEXICLIP® RAIL ANCHORS FOR CONCRETE CROSSTIES

Resist rail movement with positive holding power in ALL directions — Fast installation with regular track maintenance equipment — Jointed or welded rail — Insulated fastenings available — Ideal for high speed transit

Write or call today for descriptive literature

THE RAILS CO.

Maplewood, N. J. 07040 • Omaha, Neb. 68102
Chicago, Ill. 60604 • San Francisco, Calif. 94105
In Canada: IEC-Holden Ltd.

Circle 27 on coupon page 43

STOP BAD ODORS in all trains

Aireactor in each car:
- **PREVENTS** ODORS.
- Leaves ODORLESS, FRESH atmosphere automatically!

OTHER R.R. HOUSEKEEPING ADVANCES

AIREACTOR D.D.G.: A remarkable odor counteracting, cleaning compound with a germicide, for floors, walls, washroom, dining and Tavern cars.

SQUINCH: Science's latest achievement, for a pleasanter environment where retention toilets are used.

AIREACTOR DOOR COUNTERACTANT

USED by LEADING RAILROADS

AIREACTOR CORP.

271 Madison Ave., N.Y., N.Y. 10016

Circle 28 on coupon page 43

Advertisers Index

ACF Industries, Inc., Amcar Div. 6
ACI Systems Corp. 12
Aireactor Corp. 62
American Steel Foundries, Amsted Industries 46-47
Cardwell Westinghouse Company 9
Cities Service Oil Co. 17
Electro-Motive Div. of General Motors Corp. 54-55
First Boston Corporation 64
General Electric Company, Transportation Systems Div. 30-31
General Railway Signal Co. 52
GTE Lenkurt Incorporated 34
Hawker Siddeley/Corporate 4
Hayes Track Appliance Co., Div. Federal Sign & Signal Corp. 45
Holmes Co., Ernest 18
International Car Corp. 48
International Nickel Co., The 40-41
Kerite Company, The ..... IBC
Mannix Construction, Inc. ..... BC
MLW-Worthington Limited 10
National Castings Div. 42
Norma Fag Bearings Corp. 27
Pullman-Standard, Div. Pullman, Inc. ..... IFC
Rails Company, The 62
Servo Corporation of America 3
Speno, Frank 61
Shell Oil Company 28-29
Standard Railway Equipment 32-33
Timken Company, The 38-39
WABCO-Westinghouse Air Brake Company 51
Wix Corporation 61
Woodings-Verona Tool Works 49

WE HAVE RELAYING RAIL AVAILABLE FOR SALE AND PROMPT SHIPMENT:

400 pcs 85 lb. - 33 ft lengths
200 pcs. 90 lb. - 33 & 39 ft. lengths
350 pcs 110 lb. - 33 ft. lengths
200 pcs. 112 lb. - 33 & 39 ft. lengths
150 pcs. 132 lb. - 39 ft. lengths

ERMAN CORPORATION, INC.
332 S. Michigan Ave., Chicago, Illinois 60604
phone (312) 939-0500

"Terminal Superintendent"
Midwestern Class I railroad needs experienced Superintendent to be responsible for modern major hump yard and metropolitan terminal operation.
Send resume to Railway Age Box 110, 350 Broadway, New York, N.Y. 10013.

ALWAYS WELCOME— EASY TO GIVE
Gift Subscriptions to RAILWAY AGE. Your railroad customers will appreciate and remember your good-will gesture every time an issue arrives! (P.S. No time like the present to write for group rates.)
John E. Rogers, RAILWAY AGE, 350 Broadway, New York, N.Y. 10013

DCO The De Leuw, Cather Organization CONSULTING ENGINEERS
165 W. WACKER DRIVE • CHICAGO 60601
SUBWAYS • RAILROADS • PUBLIC TRANSIT • TRAFFIC • PARKING • HIGHWAYS • BRIDGES
PORT DEVELOPMENT • AIRPORTS • COMMUNITY PLANNING • URBAN RENEWAL
MUNICIPAL WORKS • INDUSTRIAL BUILDINGS • ENVIRONMENTAL POLLUTION CONTROL
BOSTON • BUFFALO • NEWARK • NEW YORK • OKLAHOMA CITY
PHILADELPHIA • WASHINGTON, D.C. • SAN FRANCISCO • SEATTLE

FOR SALE OR LEASE
5 50 ton air dump cars
2 70 ton covered hopper cars
Lithcote lines
10 50 ton, 40' box cars
Mid-American Car & Equipment Co.
105 W. Madison St.
Chicago, Ill. 60602
Phone 312-346-4550

RAIL EQUIPMENT ENGINEER
With 6 to 8 years' experience in designing and/or operating commuter or transit cars. Electrical engineering degree preferred. Salary to $17,000. Please send resume in complete confidence to RAILWAY AGE, Box 112, 350 Broadway, New York, N.Y. 10013.

SECTION AND EXTRA GANG FOREMAN WITH THE ALASKA RAILROAD
Must have supervisory experience in repair and maintenance of railroad track.
Section Foreman $5.94—$6.44p/h
Extra Gang Foreman $6.89—$8.42p/h
Experienced applicants apply to:
Personnel Officer
The Alaska Railroad
P. O. Box 7-2111, RR-40
Anchorage, Alaska 99501
Equal Opportunity Employer

GASL
General Applied Science Laboratories, Inc.
An affiliate of CCI Corp.
Technical and Management Services
Specializing in the implementation of new technologies for the transportation industries
Merrick & Stewart Aves., Westbury, N.Y. 11590 (516) 333-6960

TRANSPORTATION STUDIES AND REPORTS
• *Rapid Transit* • *Railroad* • *Transit Bus* • *Operations*
• *Maintenance* • *Mergers* • *Acquisitions* • *Valuations*
COVERDALE & COLPITTS, INC.
Transportation and Industrial Consultants
140 Broadway, New York (212) 943-7400

Advertising Sales Department

Chicago, Ill. 60602
29 E. Madison St.
(312) 641-5815
C. James Fisher—vice president—sales
John M. Brennan—regional sales manager
William J. Lyneis—district manager

New York, N.Y. 10013
350 Broadway,
(212) 966-7700
W. Arthur Cubbage—regional sales manager
Charles E. Keil—regional sales manager

Pittsburgh, Pa. 15234
300 Mt. Lebanon Blvd.
(412) 341-0844
Ronald M. Giallonardo—regional sales manager

Dallas, Tex. 75206
Noel Page Building
6400 N. Central Expressway
(214) 361-6972
Joseph Sanders

Los Angeles, Cal. 90025
11704 Wilshire Blvd.
(213) 477-4004
Fred Klaner, Jr.

Sausalito, Cal. 94965
3030 Bridgeway Building
(415) 332-1481
(415) 332-1482
Lewis Vogler & Co.

London S. W. 1, England
01-839 6318
67/68 Jermyn St., St. James's
Max F. Holsinger
Kenneth J. Hendry

Manchester 22, England
Haletop
Wythenshawe Civic Center
Ian Goulden

Paris, 8e, France
70 Rue de Ponthieu
Stephen Brown-Joussard
Jean-Claude Lamoine

4 Dusseldorf-Rath
Eitelstrasse 32
Max F. Holsinger,
E. Hillerbrand, Herbert Haibt,
Reinhard Schomburg

Tokyo, Japan
Sun Gain Shia, Ltd.
Shiba Nikkatsu Bldg.
13, Shiba Park
Minato-Ku
C.H. Yiu, Managing Director

This advertisement is neither an offer to sell nor a solicitation of offers to buy any of these securities. The offering is made only by the Prospectus.

NEW ISSUE

June 30, 1971

$20,000,000

ACF Industries, Incorporated

8.40% Equipment Trust Certificates (Series A)
due July 1, 1986

Price 100%
plus accrued interest from July 1, 1971

Copies of the Prospectus may be obtained from any of the several underwriters, including the undersigned, only in States in which such underwriters are qualified to act as dealers in securities and in which the Prospectus may legally be distributed.

The First Boston Corporation

Blyth & Co., Inc.	duPont Glore Forgan Incorporated	Eastman Dillon, Union Securities & Co. Incorporated	
Goldman, Sachs & Co.	Halsey, Stuart & Co. Inc.	Hornblower & Weeks-Hemphill, Noyes	
Kidder, Peabody & Co. Incorporated	Lehman Brothers Incorporated	Loeb, Rhoades & Co.	Merrill Lynch, Pierce, Fenner & Smith Incorporated
Salomon Brothers	White, Weld & Co.	Dean Witter & Co. Incorporated	Bache & Co. Incorporated

---

This advertisement is neither an offer to sell nor a solicitation of offers to buy any of these securities. The offering is made only by the Prospectus.

NEW ISSUE

June 30, 1971

$5,000,000

ACF Industries, Incorporated

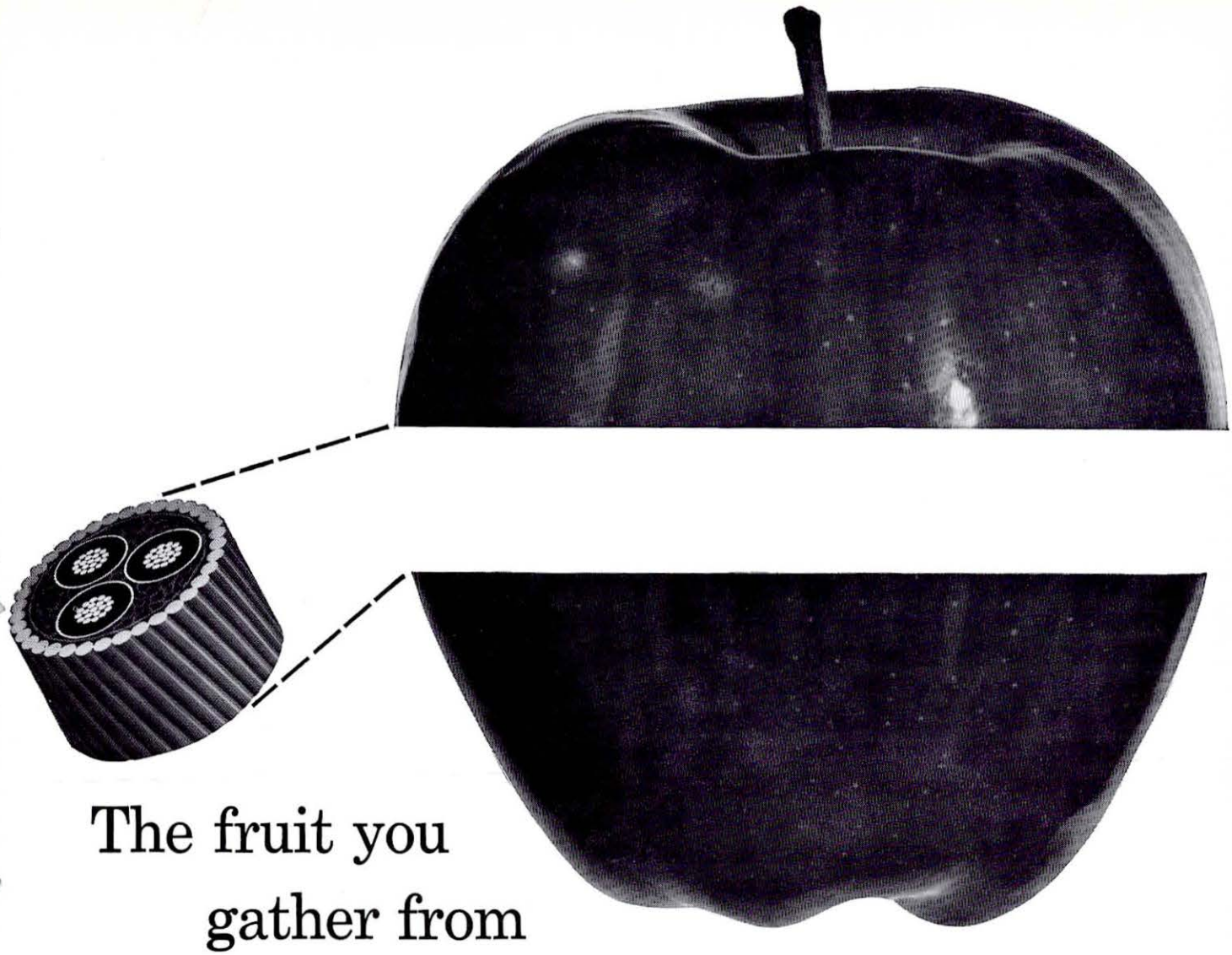
6.90% Equipment Trust Certificates (Series A) due July 1, 1972
7.20% Equipment Trust Certificates (Series A) due July 1, 1973
7.45% Equipment Trust Certificates (Series A) due July 1, 1974
7.70% Equipment Trust Certificates (Series A) due July 1, 1975

Price 100%
plus accrued interest from July 1, 1971

Copies of the Prospectus may be obtained from any of the several underwriters, including the undersigned, only in States in which such underwriters are qualified to act as dealers in securities and in which the Prospectus may legally be distributed.

The First Boston Corporation

Blyth & Co., Inc.	duPont Glore Forgan Incorporated	Eastman Dillon, Union Securities & Co. Incorporated	
Goldman, Sachs & Co.	Halsey, Stuart & Co. Inc.	Hornblower & Weeks-Hemphill, Noyes	
Kidder, Peabody & Co. Incorporated	Lehman Brothers Incorporated	Loeb, Rhoades & Co.	Merrill Lynch, Pierce, Fenner & Smith Incorporated
Salomon Brothers	White, Weld & Co.	Dean Witter & Co. Incorporated	Bache & Co. Incorporated



The fruit you
gather from
Kerite's long record of successful
performance is the greatest Quality
Assurance there is. Total Reliability—

Specify Kerite.
The proof is not just certified on paper,
it is backed by 116 years of performance.

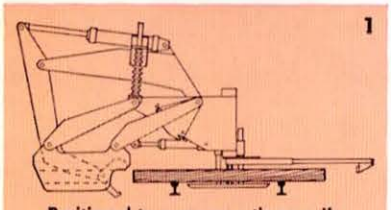
The Kerite Company • Principal Offices: Boston; Chicago; New York; Philadelphia; San Francisco; and Seymour, Connecticut • Sales Representation throughout the United States. A subsidiary of Harvey Hubbell Incorporated.

MEMBER RPI Kerite
the cable that lasts... and lasts... and lasts...

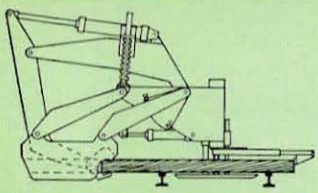
NEW MANNIX TIE INSERTER

(Patents Pending)

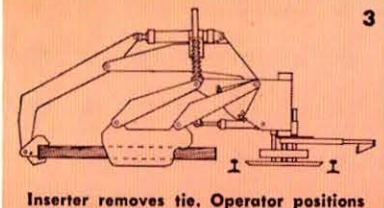
FAST
SMOOTH
SOLID
Tie Insertion



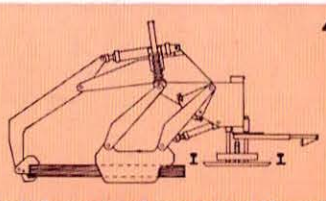
Positioned to grasp new tie on rails.



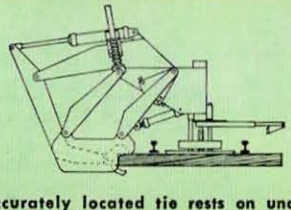
Pusher arm (right) pushes tie into jaws of inserter.



Inserter removes tie. Operator positions tie for insertion.



Tie is lowered and inserted quickly and smoothly.



Accurately located tie rests on undisturbed sub-ballast.

MEMBER RPI RAILWAY PROGRESS INSTITUTE

SIMPLE to OPERATE – Just 4 hand levers, one foot pedal and automatic transmission to control travel, tie positioning and tie insertion. An operator can learn easily and become efficient quickly.

EASY to MAINTAIN – Fewer moving parts, rugged construction and simple hydraulic control system reduce maintenance to a minimum.

OPTIONAL EQUIPMENT – (available soon). Will shove old tie out and insert new tie in one operation.

Write, wire or phone TODAY for complete details.

MANNIX
MAINTENANCE of WAY DIVISION
MANNIX CONSTRUCTION, INC.

9714 10th Avenue, North, Minneapolis, Minnesota 55427, U.S.A., Phone: Area 612, 545-0411. Cable Address, MANNIX.